innovason

PUSH THE LIMITS.

ECLIPSE by innovason

User Guide

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New In Nova 2

Nova Version 2.0 software introduces a number of new and improved features. If you are familiar with Eclipse, then use this list to locate more information on each topic. You can find instructions on how to install the new version of Nova software on Page 503.

Shelving and High/Low Pass Filters for Parametric EQ

The upper and lower bands of parameteric EQ can now be switched to a shelf or a high/low pass filter, see Page 141.

New Stereo Channel Operation

Configuration of mono and stereo input channels and mix busses is now very simple:

Any input channel may be mono or stereo LR. This decision is made when you patch inputs to the control surface (from the **PATCH IN** grid) allowing you to decide “on the fly” whether input channels are mono or stereo, see Page 238.

Any mix bus (including Matrices) may be mono, stereo LR or stereo LRC. This decision is made when you assign channel types from the **PERSONAL CONSOLE BUILDER**, see Page 225.

Channels feature a true stereo dynamics section and Balance/Width control. The LR or LRC components may be deployed to the Smart Panel in order to edit the left, right and centre, see Page 184.

New Functionality for the Fader Strip Pots

The rotary control (pot) on the Fader strips can now be switched between one of the three modes: **Gain**, **Pan** or **User**:

- **Gain** – can control either analogue Gain or digital Trim.
- **Pan** – adjusts left/right pan on mono channels and balance/width on stereo channels. It can also switch between dependent panning (to all stereo busses) and independent panning (to the selected bus) making it easy to setup independent pan for Aux sends.
- **User** – can be assigned to any variable parameter – for example, EQ Gain, Compressor Threshold, etc.

For details on **Pot.** configurations and assigning the **User** pot, please see Page 120.

Personal Mix Memories for Auxes

A “Personal Mix” saves the send levels, panning and routing for a particular Aux. This allows you to save a different monitor mix for each musician working on the show. For example, if you have different drummers who work on different nights of the week, you can save a Personal Mix for each performer, see Page 387.

New Linking Methods: Smart Link and Fast Link

Channel linking can now be configured from the console, using **Smart Link** mode, as an alternative to the **Link Channel** display, see Page 411.

Fast Link creates a temporary link group in order to update a parameter across several channels on the fly. This can be quicker than using Copy and Paste. See Page 418.

The Fast Configuration Window

This window allows you to set default parameters, such as EQ On, Dynamics On, Level to 0dB, bus routing, etc. for input, Aux, Group, Matrix, Master and VCA channels. You can choose to apply your settings to the current mix, or use the settings for new channels assigned to the surface from the Personal Console Builder. See Page 318.

Assignable Functions for the User Defined Panel

The six VU meters, four rotary controls and four switches on the USER DEFINED panel can now be assigned from a variety of functions. These include short cuts to favourite menus; selecting and sending MIDI program changes; grouped switch changes; access to functions such as tap tempo. See Page 322.

Over Ram for Direct I/O

New OVERRAM buttons on the **PATCH DIRECT** display allow you to select a single crosspoint, or an area of crosspoints, so that patching and IO parameters can be written into other Pages in RAM. This allows you to modify settings for inputs or outputs which are not assigned to the console surface, such as a talkback microphone. See Page 256.

Over Ram for Aux Sends

Two new options for Aux mixes exist within the **Over Ram** display, see Page 399:

- **All Inputs to Aux Send** – allows you to Over Ram all sends to an Aux (or Auxes) in one operation.
- **Selected Inputs to Aux Send** – allows you to Over Ram selected sends to an Aux (or Auxes). For example, if you just want to change the level of one instrument to a monitor feed.

Multiple Copy and Paste

This operation copies settings from a range of channels, allowing you to paste them to a different range. For example, if the same drummer plays in more than one song and you wish to vary the channel layout between songs, you can copy the drum mix to a different set of channels within each Page. See Page 394.

Integrated Control of Ethersound Devices including Aqonda, DM-8 and SR-16

I/O patching can now be controlled for any Ethersound device detected on the network. In addition, the Nova software supports parameter control for specially supported Ethersound devices. These include Digigram’s Aqonda 16, Innovason’s SR-16 and Neumann’s DMI-8. See Page 273.

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About This Manual

How to Use This Manual

Before we guide you through the operation of the **Eclipse**, first a few words about this manual.

Chapter 1 introduces the console. Read this chapter to learn more about the system's concepts and capabilities.

Chapter 2 deals with installing and connecting a console supplied with the standard Eclipse I/O and M.A.R.S. package.

Chapter 3 covers the basic operating principles of the console surface and Nova management software.

Chapter 4 provides a "Getting Started" guide to loading and working from the standard template File. If you have limited time to learn the console, then these two chapters are for you!

Chapters 5 to 8 cover each area of operation in greater detail.

Chapter 9 deals with the operation of the Nova software from an offline PC.

Chapter 10 describes the operation of M.A.R.S., Eclipse's integrated hard disk recorder.

Chapter 11 provides information on technical procedures: how to use M.A.R.S as a backup computer for Nova; how to install new NOVA software; resolving communication issues; and the System Setup window.

Use the Table of Contents at the beginning of the manual or Index Directory (Page 523) to locate help on a particular topic. Appendices, Technical data, a Glossary of terms and the Index Directory are provided at the end of the manual.

You will find additional installation and service information for the **Eclipse** in the "Eclipse Technical Manual".

Tip

You can also access more information on the Innovason website at http://www.innovason.com. Here you may download any additional documentation on the latest releases for your product.

Conventions

Throughout this manual we will be using a number of conventions:

Action Buttons

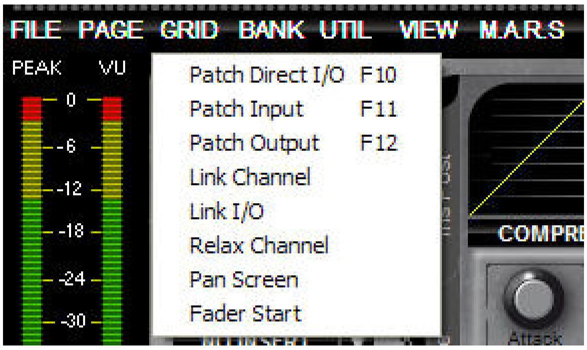
To help distinguish explanatory text from the text referring to items on the console:

Silk screened text on the console’s front panel is referred to in UPPERCASE and button cap engravings are written in **bold** – for example, press the **48V** button located on the INPUT control panel to enable or disable phantom power.

On-screen buttons and descriptive text within the Nova touch-screen displays are both referred to in **bold**.

Console keyboard keys are referred to inside [ ] marks - for example, press the [**F11**] key to access the **PATCH INPUT** grid.

Menu paths are referred to as a string of selections – for example, select “**GRID** -> **Patch Input**” from the main menus:



	Patch IN **(UTILITIES)**
	“GRID -> Patch Input”
	[F11]

Also look out for the tables shown opposite which summarise how to select a display or option from a front panel button, trackball/mouse or keyboard short-cut key.

Screenshots

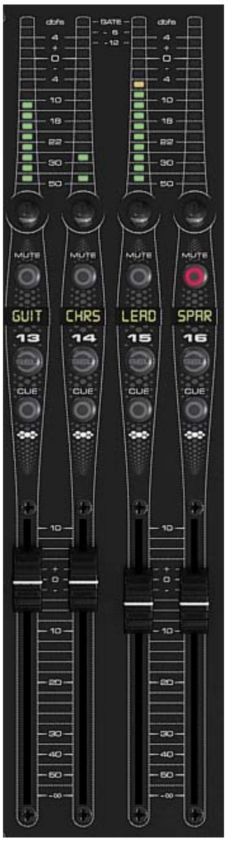
Please note that most of the Nova screenshots used in this manual have been taken offline. As a result, meters may be shown at full scale rather than at normal operating levels.

Chapter 1: Overview

Welcome

Eclipse is a powerful live mixing and recording console with the flexibility to adapt to Front of House (FOH), Monitors or OB van applications.

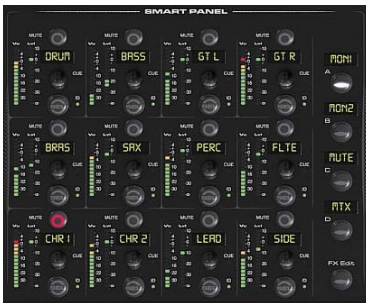
Control Surface Overview



Fader Strips

The lower half of the **Eclipse** control surface features 48 Fader strips each with its own VU meter, rotary control (gain, pan or user), Label, ID, **MUTE**, **CUE** and fader select (**SEL**) button.

Faders are touch-sensitive and motorised. Each is clearly labeled with a 4-character user name and colour-coded ID. The IDs enable you to glance across the console and easily distinguish inputs (blue) from Auxes (green), VCAs (yellow), Masters (red), Matrix outputs (violet), etc.



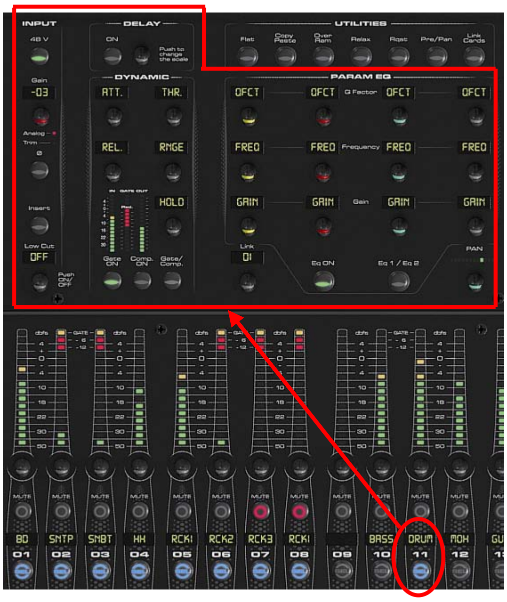
Smart Panel "Strips"

Above Fader strips 14 to 20 you will find the SMART PANEL. This provides 48 additional control strips available in 4 layers: A, B, C and D.

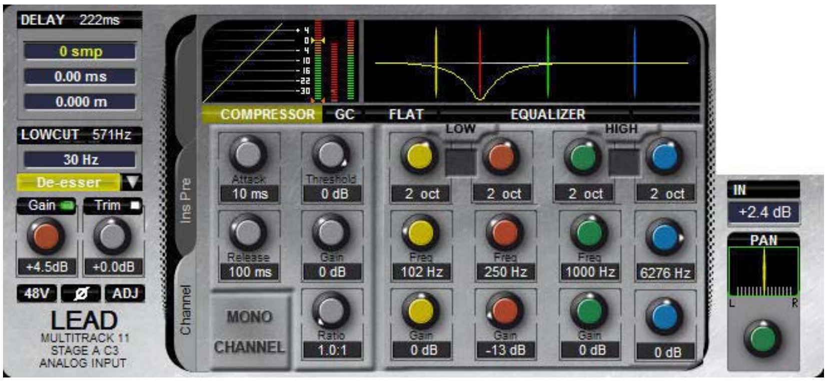
Each Smart Panel strip features the same functionality as a Fader strip, except level and cue are adjusted by a rotary control, and there is no Gain/Trim/Pan control.

Selected Channel Control

To the left of the SMART PANEL are the INPUT, DELAY, DYNAMIC, PARAM EQ and PAN sections. Together these form a "channel strip" for the selected Fader or Smart Panel strip:

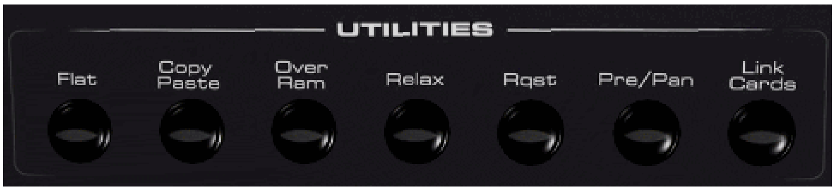


Once a **SEL** button is active (flashing), these panels offer direct control of *all* settings – gain, insert switching, low cut filter, delay, dynamics, equalisation and panning. The controls work in conjunction with the Main Mix display which provides graphical feedback on the selected channel:



Utilities

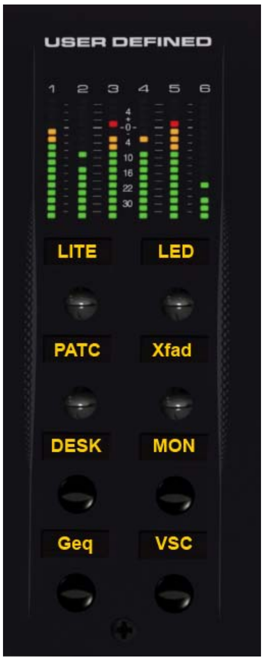
Above the PARAM EQ is a UTILITIES panel with access to a range of functions:



- **Flat** – resets the Gate, Compressor, Parametric EQ or Graphic EQ section on the selected (**SEL**) channel.
- **Copy Paste** – used to copy and paste channel parameters.
- **Over Ram** – writes parameters from the selected channel into other Pages (snapshots). For example, to overwrite a new mic gain into all the Pages for a show.
- **Relax** – isolates parameters so that they are not reset by a Page load. For example, if you are using Pages to recall a different mix for each song, you might Relax the vocal faders so that there are no sudden jumps in level.
- **Rqst** – turns the channel select (**SEL**) buttons into on/off buttons for a requested parameter. For example, to turn EQ on or off across multiple channels.
- **Pre/Pan** – provides an overview of bus routing from the selected channel (or to the selected output), with options to configure pre-fader or independent pan sends.
- **Link Cards** – links I/O parameters on an input or output card. For example, to link mic preamp gain on input cards, or to link output processing on output cards.

User Defined Panel

The USER DEFINED panel provides six VU meters, four rotary controls and four switches. Functions are assigned to each control from the “**UTIL** -> **User defined assignment**” menu.



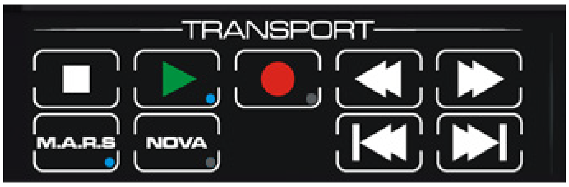
Touch-Screen

The console screen is a touch-screen display which can be switched between two control computers:

- **NOVA** – Eclipse's management software. Nova controls the console and stores/recalls mix settings.
- **M.A.R.S.** (**M**ultitrack **A**udio **R**ecording **S**ystem) – Eclipse's integrated 64-track hard disk recorder.

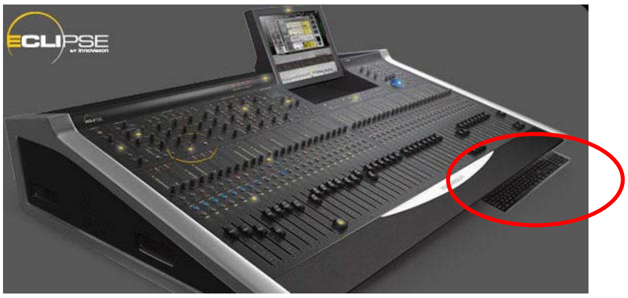
M.A.R.S. Control Panel

Below the touch-screen, the **M.A.R.S.** control panel provides transport and cue control for recording and playback:



Trackball and Keyboard

A trackball is situated to the right of the touch-screen and the console keyboard, with its own trackball, pulls out from the front drawer. Many functions can be selected either by touching the screen, using the trackball, or pressing a keyboard shortcut key.



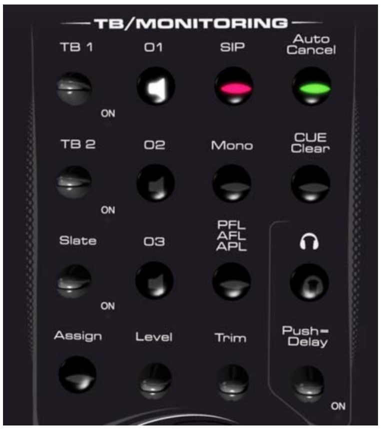
USB Ports and Timecode Display

To the left of the touch-screen are two USB ports for importing and exporting data. The timecode display can show timecode from either the M.A.R.S. hard disk recorder or Nova's external MIDI input.

Power Status Indicators

To the right of the touch-screen are a row of LEDs indicating the status of power supplies (A and B) and internal voltages.

TB/Monitoring



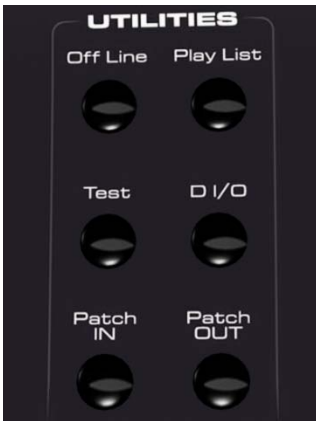
Below the Power indicators are the console's talkback, monitoring and headphone controls.

Eclipse includes a stereo monitor bus which may be switched to three different monitor outputs. In addition, a headphone output is provided at the front of the console (1/4" jack).

The console's **CUE** buttons may operate as AFL, PFL or Solo-in-Place (SIP).

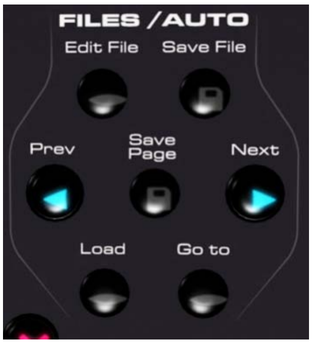
Talkback may be switched to three different outputs. A talkback microphone input is provided at the front of the console (XLR).

Utilities



A second UTILITIES panel provides access to:

- **Off Line** Mode – use this mode to load Pages to the console to check or modify settings without affecting the current mix.
- **Play List** – the Play List manages Page automation. For example, to change the order of Pages for the show, to set crossfade times between Pages, etc.
- **Test** – routes the Oscillator test tone to the selected channel.
- **D I/O** – displays the **PATCH DIRECT** grid.
- **Patch IN** – displays the **PATCH IN** grid.
- **Patch OUT** – displays the **PATCH OUT** grid.

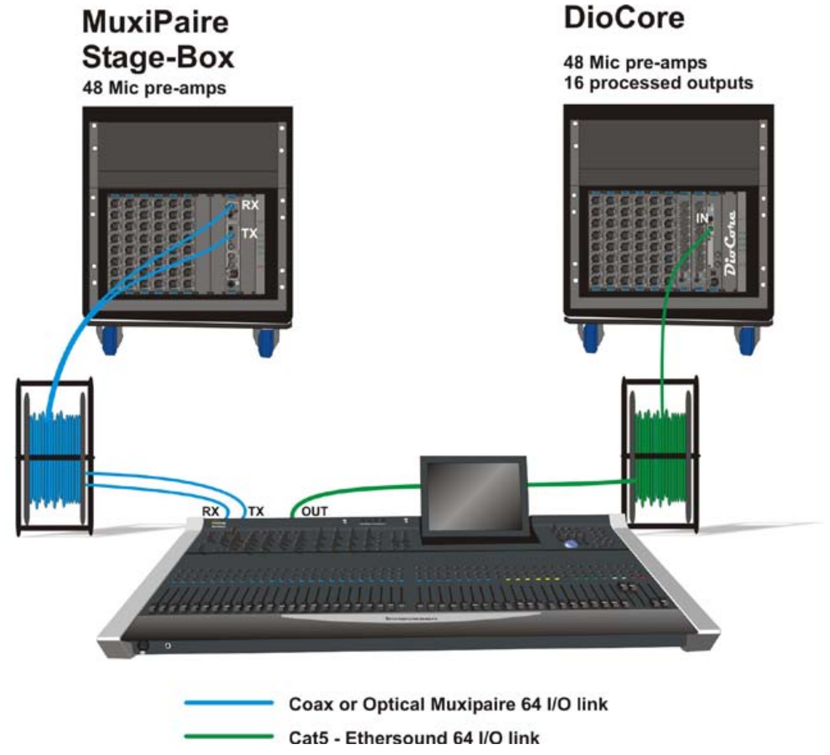


Files/Auto

The FILES/AUTO panel provides buttons for saving settings (Files) and managing console automation (Pages).

System Overview

Unlike an analogue console, **Eclipse** consists of much more than just the operating surface; a system may incorporate three physical components:



- **Console** – houses the console's DSP processing and master control, six slots for local i/o and internal effects cards, and an internal PC running the Nova software. Note that the console frame also houses a second PC and removable hard disk for M.A.R.S., Eclipse's integrated hard disk recorder.
- **DioCore** – an external unit connected to the console via Ethersound, offering up to eight slots for input and output cards. The DioCore may be located up to 100m from the console on coax (CAT5) connection.
- **Muxipaire Stagebox (optional)** – an external unit connected to the console via Innovason's Muxipaire interface (coax or fibre). This Stagebox works in parallel with the six i/o and effects slots in the rear of the console, providing a way to remote additional i/o onto the stage if required.

I/O and FX Cards

The six slots at the rear of the console (or in a Muxipaire Stagebox) and the eight slots in a DioCore may be fitted with any combination of the following I/O:

- **SI-8D3** – 8 mic/line inputs (on 8 balanced XLRs).
- **DI-8S** – 4 AES inputs (8 mono channels on 4 balanced XLRs).
- **DI-8Src** – 4 AES inputs with sample rate conversion (8 mono channels on 4 balanced XLRs accepting sample rates from 32kHz to 56kHz).
- **UM-8PO** - 8 analogue line outputs (on 8 balanced XLRs). Each pair of outputs may be switched to AES. All 8 outputs are also available as ADAT via a TOSlink connector. Each output has its own signal processing (Compressor, Gate, 8-band Parametric EQ, 31-band Graphic EQ and Delay.) (*Note that the UM-8PO is not recognised in a Muxipaire Stagebox*; *use the* ***MO-8D3*** *card instead.)*

The internal effects card can be fitted only in the rear of the console:

- **FM-8VB** – 8 channels of internal effects. Each pair of channels may be linked for stereo operation. Each channel has 4 effects engines which may operate a VB Audio plug-in (Reverb, Echo, Chorus, Flanger, De-esser, Compressor, Gate, Multiband Compressor, etc.)

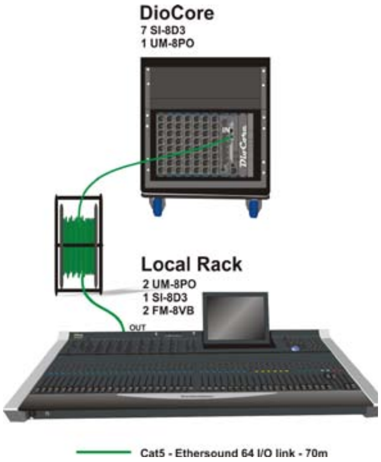
Note

Note that all cards operate at 24-bit, 48kHz. (If the system is synchronised to an external clock signal, then the sampling frequency may operate from 43-49kHz).

The Standard Eclipse I/O Package

So that you know what to expect, particularly when arriving to work on a rental console, **Eclipse** is delivered with a standard package of i/o and internal effects cards which consists of:

- **1 DioCore** – remote stage i/o with:
  - 7 SI-8D3 cards = 56 Mic Preamps
  - 1 UM-8PO card = 8 Outputs (Line/AES/ADAT)
- **Console** - local desk i/o of:
  - 1 SI-8D3 card = 8 Mic Preamps
  - 2 UM-8PO cards = 16 Outputs (Line/AES/ADAT)
  - 2 FM-8VB = 16 mono effects bays
  - 16 Line Inputs and 16 Line Outputs



You can find more details in Chapter 2: Installation.

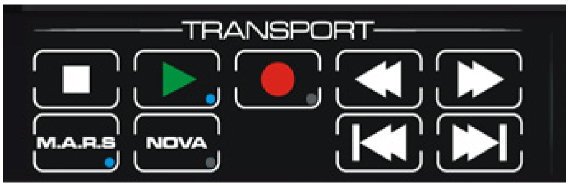
M.A.R.S.

Every standard Eclipse includes **M.A.R.S.** (**M**ultitrack **A**udio **R**ecording **S**ystem), the name of Eclipse's integrated hard disk recorder. The system provides 64 tracks of recording allowing playback of sound checks at different venues without the band being present.

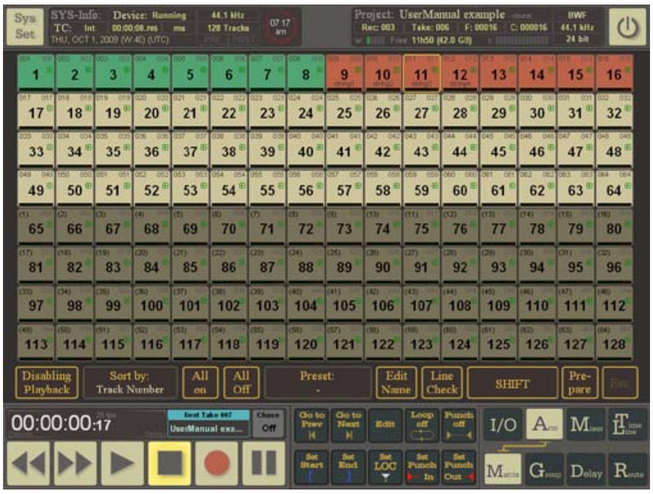
M.A.R.S. connects to the rest of the system via the Ethersound network. Consoles ship with a pre-installed Ethersound cable allowing you to play back the demo song instantly.

Audio recording is managed by the M.A.R.S. control computer (separate from Nova), and audio files are stored on the removable hard disk at the rear of the Eclipse frame.

A dedicated control panel switches the touch-screen between M.A.R.S. and Nova, and provides rapid access to recording and playback functions:



Additional functions are accessible from the M.A.R.S. touch-screen displays:



For more details on M.A.R.S. please see Page 444.

Ethersound Options

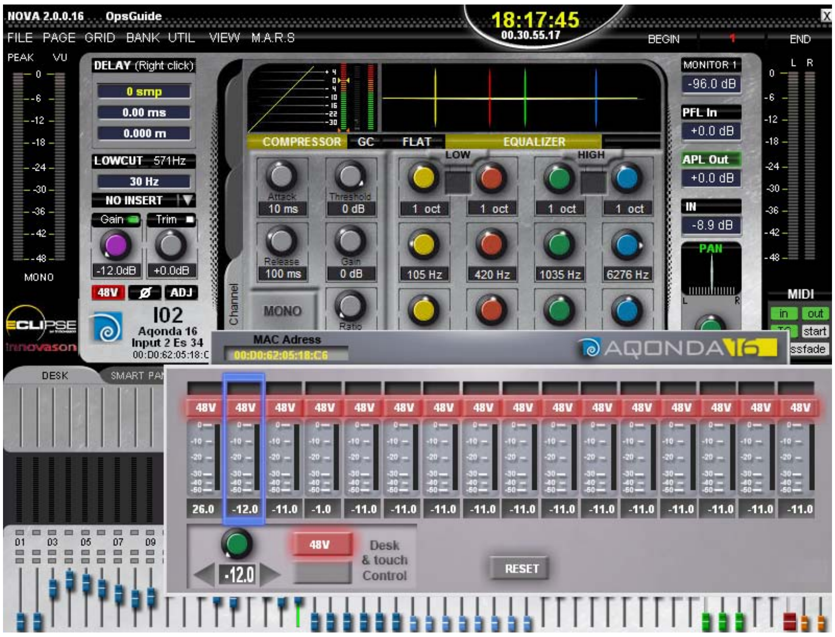
Ethersound is an open protocol offering 64-channels of bidirectional I/O via a CAT5 network cable (up to 100m). Multiple DioCores and other Ethersound devices may be connected to the Ethersound network in order to distribute I/O to different physical locations.

Note

Up to 4 DioCores may be active on each console at any one time plus an unlimited number of other Ethersound devices. The console operator may then select which 64-channels of I/O they wish to use from the Ethersound network and patch inputs and outputs accordingly.

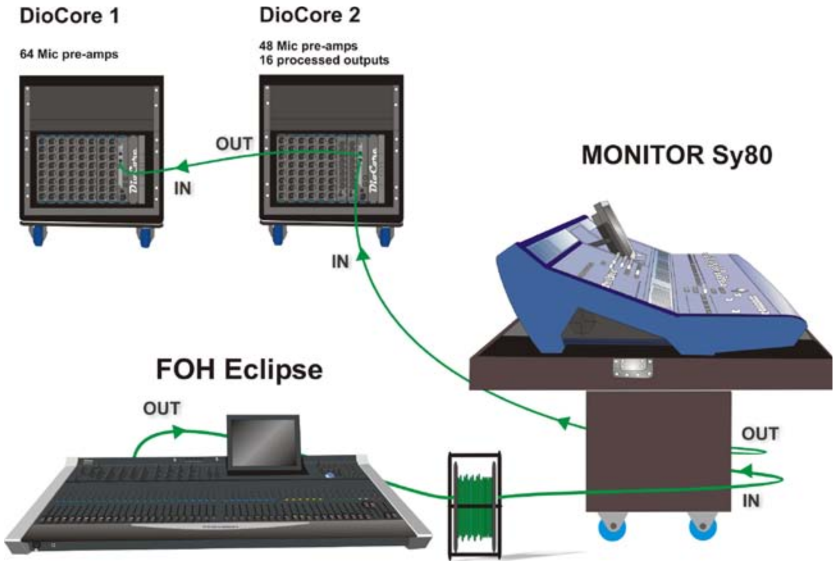
I/O patching can be controlled for any Ethersound device on the network.

In addition, the Nova software supports parameter control for specially supported Ethersound devices. These include Digigram's Aqonda 16, Innovason's SR-16 and Neumann's DMI-8. For these devices, parameters such as analogue input gain can be controlled remotely from Eclipse:

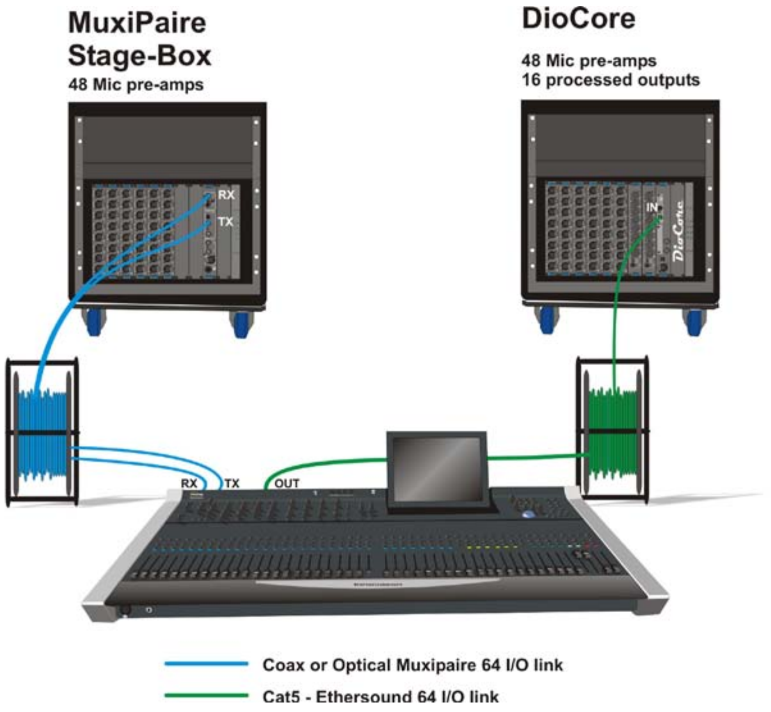


Audio Networking

Ethersound may also be used to link I/O between consoles. The example below shows two Innovason consoles sharing resources from two DioCores:



If more than 64 inputs and 64 outputs are required on stage, then an additional unit (the Muxipaire StageBox) may be added. This StageBox works in parallel with the six I/O and internal effects slots at the rear of the console. Therefore, to add a StageBox, you may need to remove local I/O from the console:



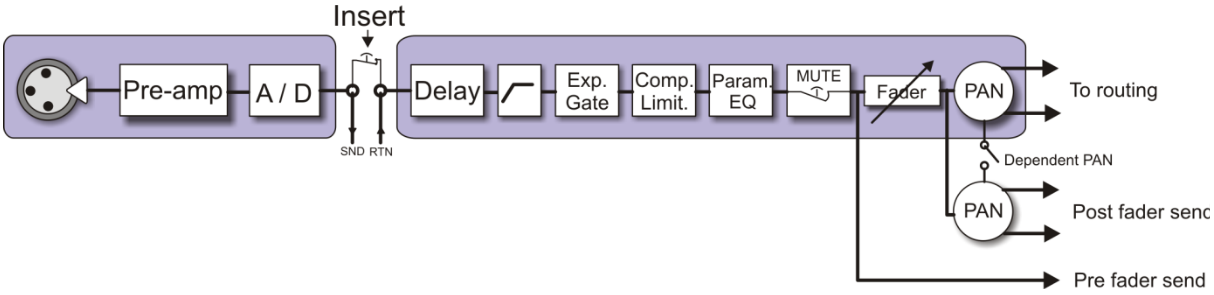
See Page 263 for more details on networking and StageBoxes.

Signal Flow

The console is equipped with a DSP engine which can mix up to 104 input channels simultaneously onto 48 mix busses.

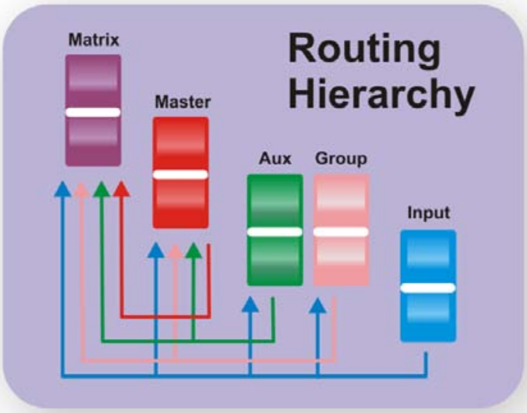
Input channels may be mono or stereo, and busses may be mono, stereo or stereo LRC. Note that a stereo channel uses two DSP resources; a LRC bus uses three DSP resources.

Each *input channel* provides:



- Analogue input control (preamp gain and 48V)
- Digital input control (digital gain trim and phase reverse)
- A Low cut filter
- Dynamics (independent Gate and Compressor)
- Delay – assignable from a pool of 48 delay resources.
- Parametric EQ (4-band, with bands 1 and 4 switchable to a shelf or high/low pass filter)
- Pre-fader insert (external device or internal effects bay)
- Pan (or Balance and Width on stereo channels)
- Main level, Mute and Cue
- Aux send level (pre-fader, post-fader or independent)
- Matrix send level (pre or post-fader)

Each *mix bus* may be configured as an **Aux**, **Group**, **Master** or **Matrix** output, allowing you to build your console signal flow to meet each show's requirements:

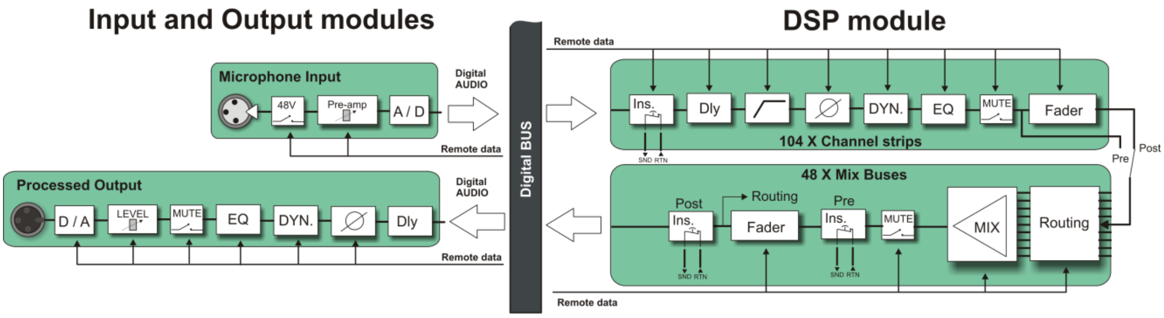


To apply signal processing to a mix bus you can either insert one of 16 internal “floating” DSP paths, or route the bus to a physical output. Every output of a **UM8-PO** card provides output processing (Compressor, Gate, 8-band Parametric EQ, 31-band Graphic EQ and Delay).

Note

Note that there is an important difference between inserting DSP and using a processed output. Inserted processing is applied to everything downstream of the mix bus channel, whereas UM8 processing applies to the physical output. This allows you to patch say a single Matrix bus to multiple outputs each with its own delay tim9nh 1e'/e, graphic EQ, etc.

The following diagram shows the division between processing on the I/O cards and processing on **Eclipse**'s DSP module:



Note

Note that in addition to the 48 configurable mix busses, a stereo bus is included for monitoring.

You can find more details on input channels on Page 131, mix busses on Page 159, output channel processing on Page 173, and monitoring on Page 206.

Channel Types

Eclipse has 48 Fader Strips plus 48 Smart Panel controllers (available in 4 layers: A, B, C and D).

Each may control any of the following channel types allowing you to lay out your source channels, bus masters and VCAs where you want them:

- **Input channel** – direct control of one of your 104 input channels.
- **Output channel** – direct control of an Aux, Group, Master or Matrix mix bus output (up to 48 mix busses).
- **VCA** – master control of level and mute for several input and/or output channels.
- **Smart Fader (SFAD)** – “layered” control of several input channels from a single fader. See the next page.
- **Monitoring Level** – control of monitor output level. You can use this option to control monitor level from a fader rather than the TB/MONITORING panel.
- **Crossfade Time** – control of the transition time between Pages when using automation.

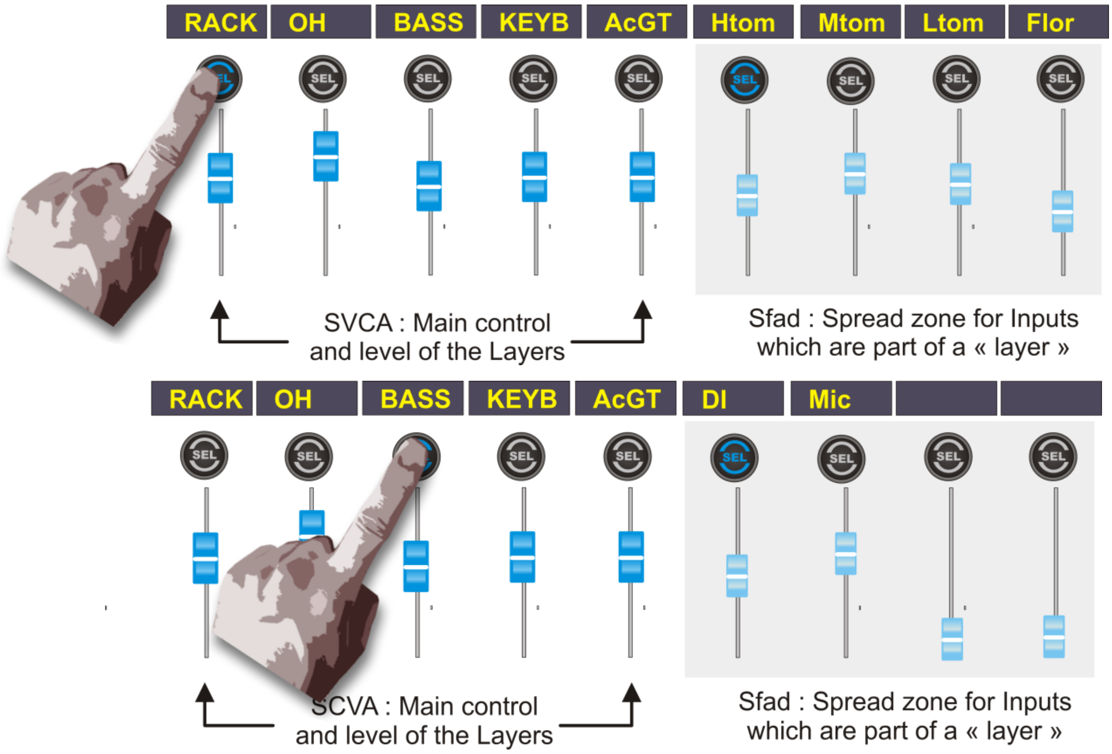
This flexibility allows you to customise the console surface for each show and for different applications.

The configuration of Fader Strips and Smart Panel Controllers is handled by Nova’s **Personal Console Builder**, see Page 221 for details.

Smart Faders (SFADs)

So far we have described how any input may be controlled directly from a Fader Strip or Smart Panel controller. However, in order to manage larger shows where the number of sources may exceed your physical faders, **Eclipse** provides a unique “layering” solution – **Smart Faders** (**SFADs**).

This solution works by using a Smart VCA (SVCA) to control a number of input slave channels. Each time you press the **SEL** button on the Smart VCA, its slaves are deployed to a pre-defined zone on the console (SZONE), thereby controlling multiple sets of “layered” inputs from very few physical faders:


RACK
OH
BASS
KEYB
AcGT
Htom
Mtom
Ltom
Flor
SEL
SVCA : Main control and level of the Layers
Sfad : Spread zone for Inputs which are part of a « layer »
RACK
OH
BASS
KEYB
AcGT
DI
Mic
SEL
SCVA : Main control and level of the Layers
Sfad : Spread zone for Inputs which are part of a « layer »

By configuring multiple Smart VCAs the layout of the desk can be customised to handle complex show configurations.

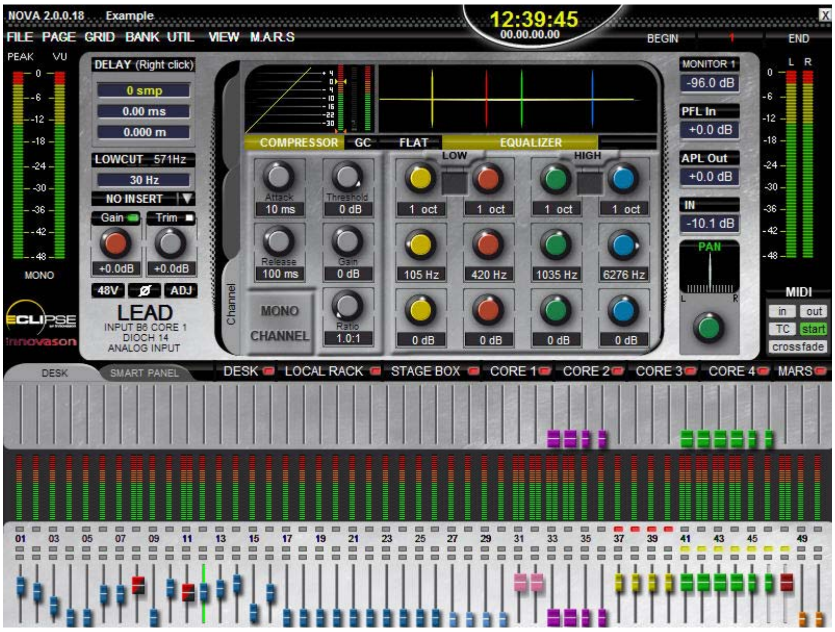
For more details on Smart Faders, see Page 149.

Nova Software

"Nova" is the name of **Eclipse**'s management software. It runs on the console's control computer during live operation, and may also run offline on a PC. This allows you to build a configuration on the way to a venue and load it to the console when you arrive.

The Main Mix Display

Nova contains a number of user displays but probably the most important is the Main Mix display:



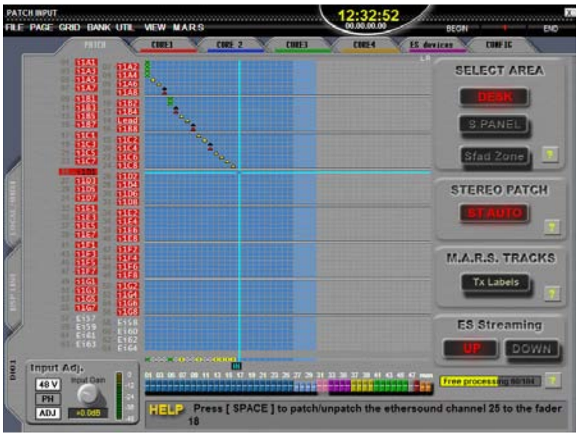
This display provides a graphical overview of your complete mix. You will see an overview of the Selected Channel and your 48 Fader Strip (or Smart Panel) main and send levels, plus output metering for the Master and any automation statuses.

The Main Mix acts as the default display. Think of this as 'home'. Other displays can be opened, to configure patching, etc., but when you close them you will *always* return to the Main Mix.

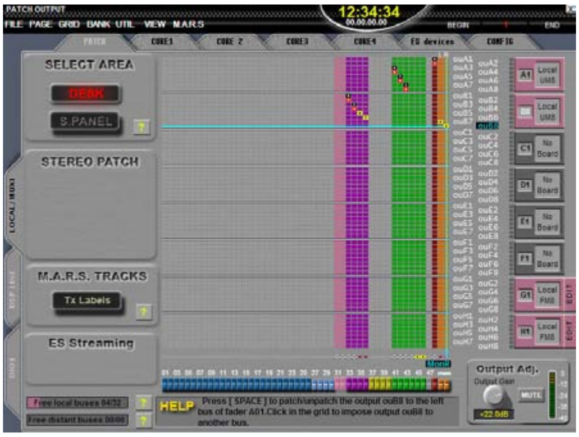
For more information on the Main Mix display, see Page 67.

Digital Patching

In addition to powerful mixing features, Eclipse includes a digital patch accessible from the Nova **PATCH INPUT**, **PATCH OUTPUT** and **PATCH DIRECT** displays:



Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18



Press [SPACE] to patch/unpatch the output ouB8 to the left bus of fader A01.Click in the grid to impose output ouB8 to another bus.

All three displays are similar in operation:

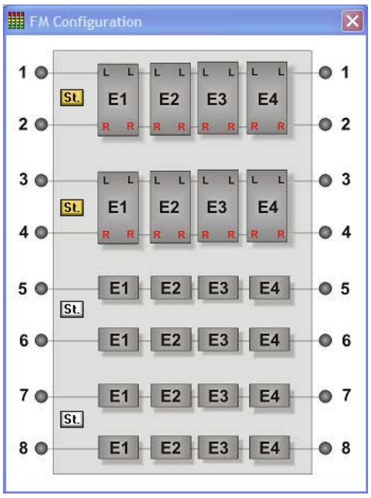
- **PATCH INPUT** – patches physical sources to channels. For example, to patch a microphone from the DioCore to an input fader.
- **PATCH OUTPUT** – patches output channels (mix busses) to physical destinations. For example, to patch an Aux to a monitor wedge.
- **PATCH DIRECT** - allows patching of physical sources directly to physical destinations. For example to feed a microphone input to an AES output for recording. This grid also allows you to declare the insert list (inputs and outputs declared as insert sends and insert returns).

Inputs and outputs may be local (at the rear of the console) or remote (in a DioCore, other Ethersound device or Muxipaire Stagebox). And multiple devices may be networked in order to share I/O resources.

Perhaps the most important feature of the digital patch is that all crosspoints are stored and recalled. This reduces any manual patching to the absolute minimum and allows you to recall the same show at a new venue within seconds!

For more details on patching please refer to Page 230.

Internal Effects (FM-8VB Card)



Eclipse includes internal effects which you can insert directly into any input or output (mix bus) channel. Alternatively, you can feed an effect from an Aux send and return it to input channels, just as you would with an outboard effects device.

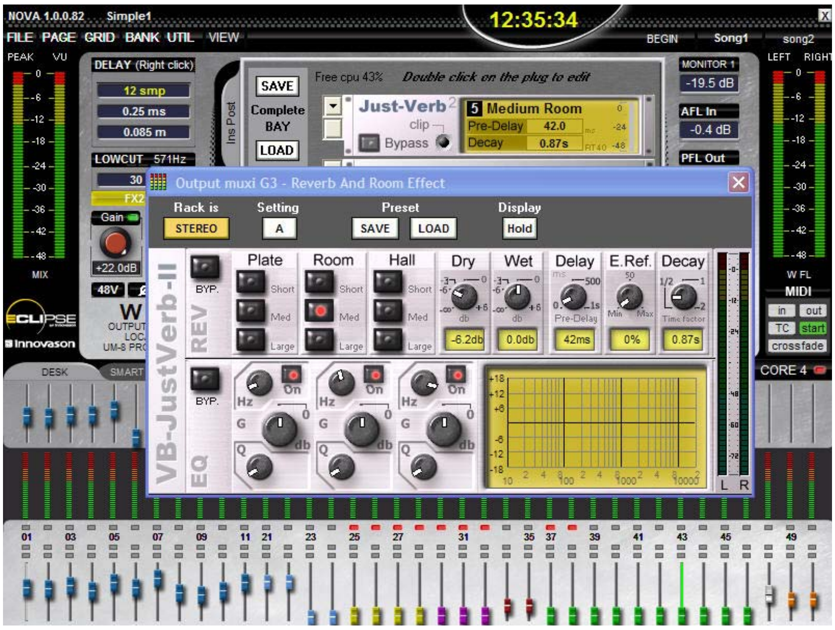
The advantages over an outboard device are:

- There is no external patching!
- You have convenient control of effects parameters from the console's Smart Panel and Main Mix display.
- All effects parameters and patching are recalled with the rest of your mix.

The effects processing is provided by the **FM-8VB** card. Two of these cards are fitted to the rear of the console as part of the standard **Eclipse** package. You may fit more cards (up to 6) providing you have spare slots.

Each **FM-8VB** card is seen by the system as an 8 input and 8 output card which feeds 8 internal effects bays; there are no physical i/o connectors to or from an FM-8VB card. Within each bay you can then assign up to four effects modules (**E1** to **E4**).

A VB Audio plug-in can be assigned to each module; available plug-ins include Reverb, Echo, Chorus, Flanger, De-esser, Compressor, Gate and a Multi-band Compressor: Once assigned, you can control each effects module from the Nova Main Mix display - here is the **Just-Verb^2** plug-in Editor:



You can also assign the module's controls onto the Smart Panel so that you can adjust effects parameters from physical controls.

For more details on Internal Effects please see Page 289.

Console Reset and Automation

One of the major benefits of the **Eclipse** is the ability to save and load all the settings required for a particular show or application.

Files and Pages

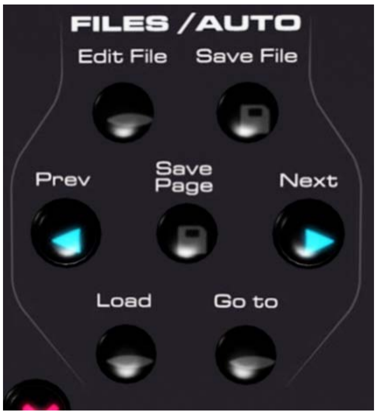
Console settings are stored and recalled from a “File” on the Nova control computer; each File may contain one or more “Pages”.

Each Page is a snapshot of all the settings for the entire console at a particular moment in time. This includes the current status of your mix, input and output patching, etc.

By creating multiple Pages, you can play out a sequence of different setups during the live show. For example, to recall a new mix at the beginning of each song.

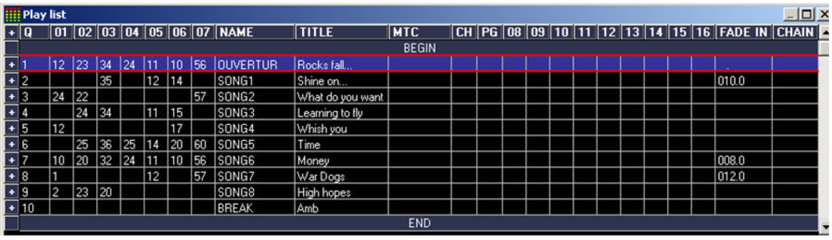
Each File can contain up to 1000 Pages plus lower level user settings not stored in a Page. These include the PCB (Personal Console Builder) configuration, General Preferences, DioCore Configuration, etc.

Automation



The **Next** and **Prev** (previous) buttons on the FILES/AUTO panel step through the Pages within the current File.

The **Play List** window can be used to manage the Page order and set crossfade times. In addition, you can set Page changes to respond to Midi timecode or Midi Program changes:

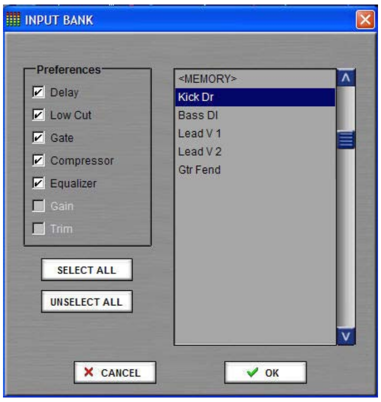


Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
BEGIN																							
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...													.	
2			35		12	14		SONG1	Shine on...													010.0	
3	24	22					57	SONG2	What do you want														
4		24	34		11	15		SONG3	Learning to fly														
5	12					17		SONG4	Whish you														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Dogs													012.0	
9	2	23	20					SONG8	High hopes														
10								BREAK	Amb														
END																							

Processing Libraries

Processing libraries save and load the settings for a particular channel independent of the current File and Page. For example, if you have created the ultimate Kick Drum EQ and Compression, it would be nice to be able to load it to any channel in any future show.

The **BANK** menu provides access to Save, Load, Delete, Import and Export library functions. Each library saves all the settings for the selected channel. When you load back, you can select which parameters you wish to load.



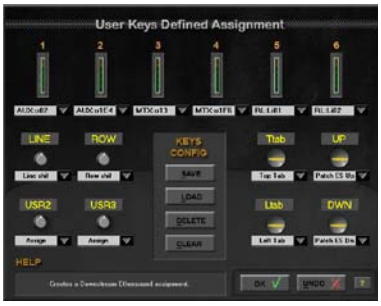
☑ Delay
☑ Low Cut
☑ Gate
☑ Compressor
☑ Equalizer
☐ Gain
☐ Trim

Personal Mixes

A “Personal Mix” saves the send levels, panning and routing for a particular Aux. This allows you to save a different monitor mix for each musician working on the show. For example, if you have different drummers who work on different nights of the week, you can save a Personal Mix for each performer.

Each Personal Mix stores the send levels, pan position (if panning is independent) and routing for a specific Aux. Personal Mixes are saved in the current File. You can load a Personal Mix to any Aux; the Aux mix is updated for all Pages.

User Defined Panel – Keys Config



You can save different configurations for the functions assigned to the USER DEFINED panel; each configuration can be saved and loaded independently of the current File and Page. This allows you to create Key Configurations for different applications such as patching, FOH mixing, mixing monitors, and so on.

Default Patch Memories

Within the **PATCH IN**, **PATCH OUT** and **PATCH DIRECT** grids, you can save a default memory which is also independent of the current File and Page. You can use these memories to save default patching, I/O settings and Labels which can then be loaded back as the basis for a new show.

Importing and Exporting

Files, Libraries, Key Configurations and Patch Memories are all stored on the Nova control computer and may be exported to USB for transfer to other systems.

For full details on Files, Pages, Automation and all other data storage functions, please see Chapter 7 (Page 341).

The Standard Template

In this brief overview, we hope you have an idea of how flexible **Eclipse** can be. So to reduce your setup time and make the console easy to operate ‘out of the box’, each console is shipped with a pre-installed standard template File. Load this File and you can be operating **Eclipse** within a matter of minutes!

The template defines a typical user configuration, where input channels, Auxes, Groups, a Master and Matrix busses are pre-assigned to the console surface. Default input and output patching are also implemented so all you need to do is connect your microphones, PA, monitors and you will have a working configuration.

You can find details on loading the template, together with a quick-start guide to common console operations, in Chapter 4 (Page 88).

Chapter 2: Installation

Introduction

This chapter covers the installation, connections and power on sequence for a standard Eclipse package including M.A.R.S.

If your system contains non-standard components or you wish to learn more about networking multiple Innovason consoles, please refer to Page 263 and the “Eclipse Technical Manual”.

Before Installing This Device

⚠ Warning

Warning

Please read and observe *ALL* of the following notes before installing this product:

- Check all of the hardware devices for transport damage.
- Any devices showing signs of mechanical damage or damage from the spillage of liquids *MUST NOT* be connected to the mains supply or disconnected from the mains immediately by pulling out the power lead.
- All devices *MUST* be connected to the mains using the three-cord power leads supplied with the system. Only supply electrical interfaces with the voltages and signals described in these instructions.
- All devices *MUST* be grounded. Grounding connectors are provided on all devices. If the power cord has a three-pin plug, it will provide sufficient grounding so long as the AC socket is grounded correctly.
- Do not store or use the system at extreme temperatures, or in an environment with exposure to vibration, dust or humidity.
- Do not block the ventilation holes when installing the device. Blocked ventilation holes are a fire hazard.
- Do not place the device (console or audio rack) too close to strong electromagnetic radiation sources (video monitors, high-voltage cables, etc.), as this might cause a degradation of audio quality via induced currents in the connections and frame.
- Never connect a device (e.g. camera) that has its own phantom power activated as this will destroy the input or output. Switch the phantom power off, or if this is not possible, go through an external device first (isolation transformer, intermediate pre-amp, etc.).
- The control surface panels and individual card components contain no user-serviceable parts. Therefore do not open the devices other than to perform the procedures described in this manual.
- Any swapping of modules *MUST* be performed with the device switched off and disconnected from the mains supply.

The Standard Eclipse Package

A standard **Eclipse** consists of two physical components:

- **1 DioCore** providing stage I/O:
  - 7 SI-8D3 cards = 56 mic preamps
  - 1 UM-8PO card = 8 outputs (Line/AES/ADAT)
- **1 Console** providing local I/O:
  - 1 SI-8D3 card = 8 mic preamps
  - 2 UM-8PO cards = 16 outputs (Line/AES/ADAT)
  - 2 FM-8VB = 16 mono effects bays
  - 16 Line inputs and 16 Line outputs

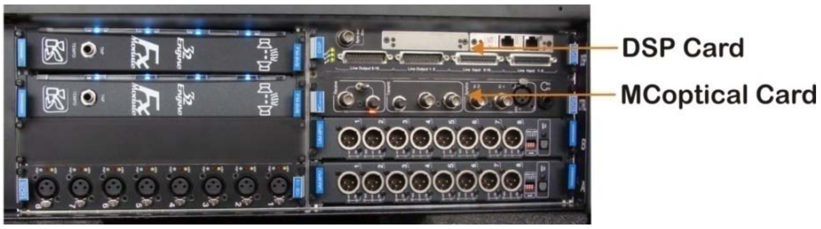
Note

Note that the Console frame also houses two separate control computers for:

- **NOVA** – the Nova mix management software which controls the console and stores/recalls mix settings.
- **M.A.R.S.** – the hard disk recorder. All audio recording is managed by the M.A.R.S. control computer. All audio files are stored on the M.A.R.S. hard disk which slots into the rear panel of the frame.

Console:

Every console is *always* fitted with the **DSP** and **MC$_{\text{optical}}$** cards:



DSP Card (with DIO interface)

This card provides the console's internal DSP processing: 104 input channels, 48 mix busses, 16 floating DSP paths and 48 assignable Delays.

It also includes 16 Line level balanced inputs, 16 balanced outputs, and an Ethersound interface for connection to the DioCore, external Ethersound devices and/or M.A.R.S.

The card hosts 3 LEDs (**Sync**, **Prog** and **Pwr**) which indicate its status.

There is also a BNC connector labeled **Sync out Dio** to clock the console from an incoming Ethersound network (DioEs module), in cases where the console is not the primary master of the Ethersound network.

MC$_{\text{optical}}$ Card (Control and Sync)

This card handles control and synchronisation. It generates the audio clocks, drives the digital bus, and handles communications with the console's integrated PC.

Note

The card provides a choice of BNC or optical Receive and Transmit connections to a remote StageBox. A Muxipaire Stagebox is an option on the Eclipse system, see Page 285 for more details.

You will also find three connections for synchronisation:

- **Wc In** (BNC) – to connect an external Wordclock sync reference.
- **Wc Out** (BNC) – Wordclock out. This output follows the selected sync source and can be used to distribute system clock to external devices.
- **AES In** (XLR) – to connect an external AES sync reference.

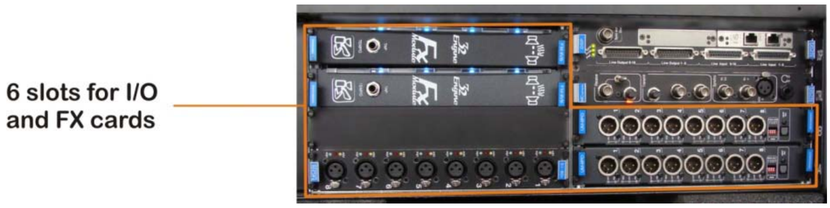
See Page 48 for details on selecting the clock source.

The headphone output (stereo ¼" jack) on the MC$_{\text{optical}}$ card is left over from historical products and is not used on Eclipse.

I/O and Effects Cards

There are then six I/O card slots which may be fitted with any combination of I/O or internal FX cards. See Page 19 for an overview of the available options.

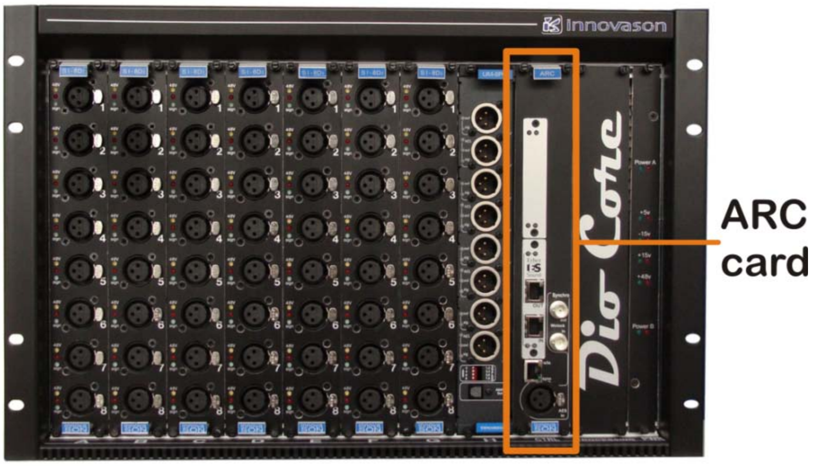
The standard Eclipse package is delivered with five I/O cards leaving one slot available for future expansion:



6 slots for I/O and FX cards

Card	No.	I/O	Connector
UM-8PO	2	16 balanced outputs with DSP processing and adjustable max level. Each pair is switchable to AES; all 16 outputs available on ADAT.	XLR XLR TOSLink
FM-8VB	2	16 internal effects racks Any pair stereo; up to 4 effects plug-ins per channel.	n/a
SI-8D3	1	8 Mic/Line balanced inputs	XLR
DSP	1	16 Line Level inputs 16 balanced outputs Ethersound interface (64- channels)	SubD25 SubD25 CAT 5

DioCore:



Every DioCore is *always* fitted with an **ARC** card:

ARC Card (Audio Rack Controller)

This card handles the Ethersound connection to the console, and in a networked installation, to and from other consoles or DioCore networks. The standard CAT5 connections allow the DioCore to be located up to 100m from the Eclipse control surface. You can find details on DioCore networking on Page 263.

You will also find three connections for Synchronisation:

- **Wc In** (BNC) – to connect an external word clock sync reference (this is a future option).
- **Wc Out** (BNC) – word clock out. This output follows the selected sync source and can be used to distribute system clock to external devices.
- **AES In** (XLR) – to connect an external AES sync reference (this is a future option).

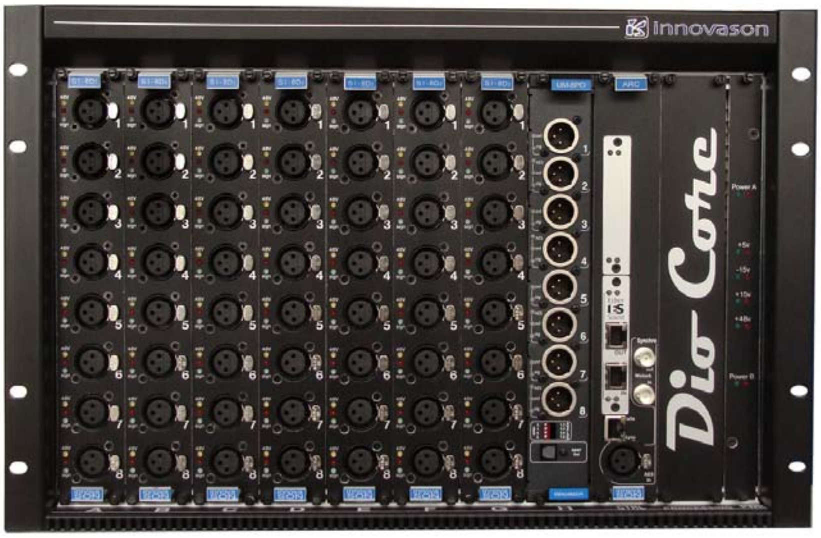
You can find more details on clock signals on Page 48.

There is also another CAT5 connector (rx/tx and sync LEDs) above the AES In XLR. This Ethernet port allows you to re-programme, when necessary, the ARC card firmware.

I/O Cards

The DioCore provides eight I/O card slots which may be fitted with any combination of I/O cards (the FX card is not managed by the DioCore). See Page 19 for an overview of the available options.

The standard package is delivered with a full complement of cards as follows:



Card	No.	I/O	Connector
SI-8D3	7	56 Mic/Line balanced inputs	XLR
UM-8PO	1	8 balanced outputs with DSP processing and adjustable max level. Each pair is switchable to AES; all 16 outputs available on ADAT	XLR XLR TOSLink
ARC	1	Ethersound interface (64-channels)	CAT5

Handling and Transportation

Before you move the console, make sure that everything is disconnected.

The integrated touch-screen rotates so that it can be laid flat for transportation, and the **Eclipse** console provides two hand grips at each side for easy maneuvering.

⚠ Warning

Warning

At least two people are required to handle and carry the console properly.

Never put excessive pressure on the pots, switches and connectors.

Cleaning the Console Surface

To clean the surface of the console, use a soft, dry cloth. Only use water or ethylic alcohol to clean the casing and silk-screen printed surfaces; other solvents can damage the paint or plastic parts.

⚠ Warning

Warning

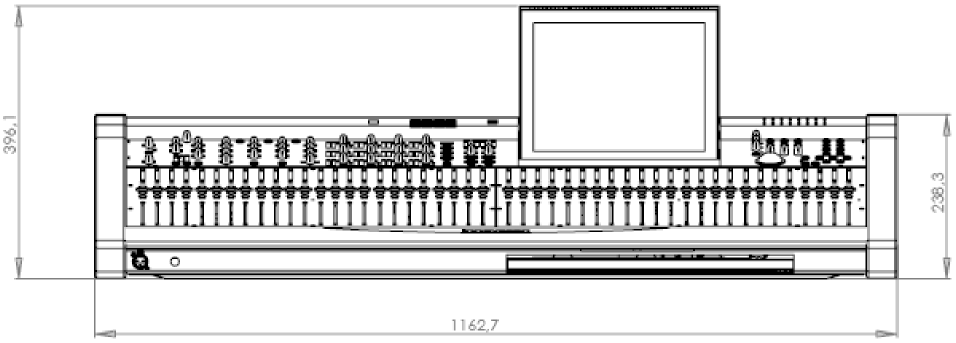
Do not allow liquid or any foreign object to enter the Eclipse or allow the Eclipse to become wet. Fire or electrical shock may result.

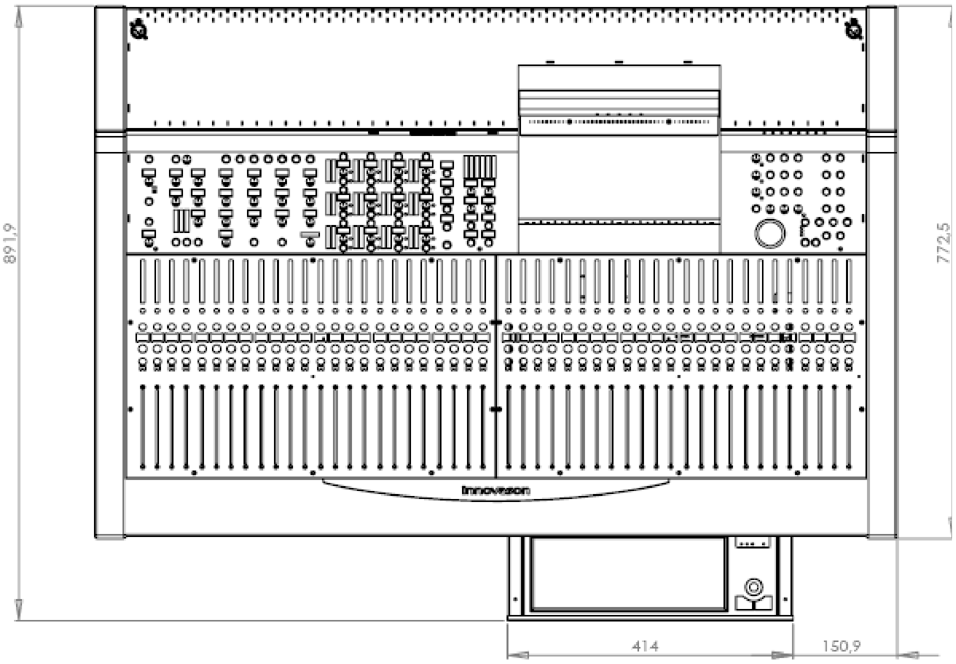
Dimensions and Weight

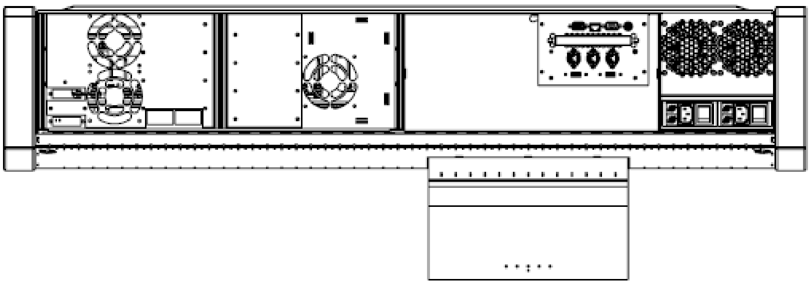
Control Surface

The Eclipse control surface is supplied with a flight case and protective cover. The dimensions and weight of a console fitted with the standard I/O package are:

	Dimensions (H x W x D):	Weight
Console only	45,74 x 30,4 x 9,33”	99lb
Console with flight case	49,6 x 48 x 15,15”	132 lb



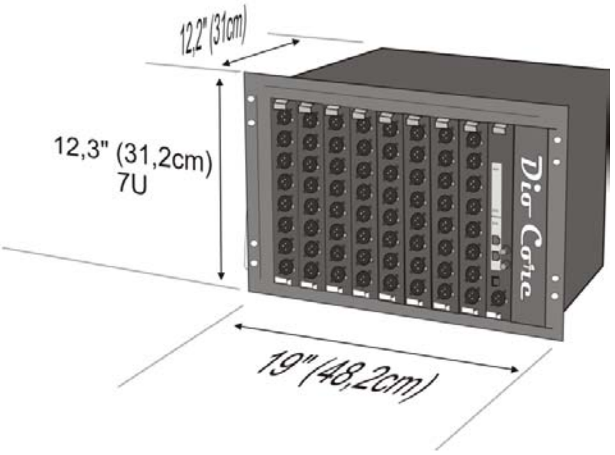


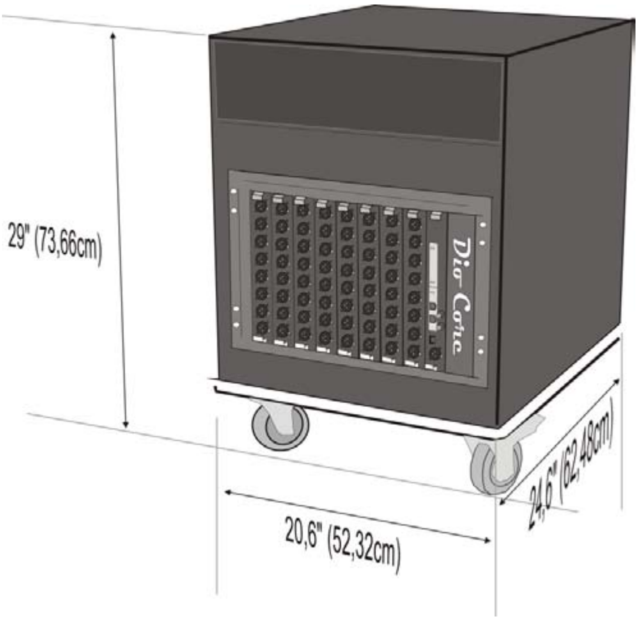


DioCore

The DioCore is supplied with a flight case. The dimensions and weight of a DioCore fitted with the standard I/O package are:

	Dimensions (H x W x D):	**Weight**
DioCore only	12.3 x 19 x 12,2”	44lb / 20Kg
DioCore with flight case	29 x 20.6 x 24.6”	59.5lb / 27Kg





Ambient Conditions

Proper operation of the Eclipse system components can only be guaranteed at the following ambient temperatures:

Component	**Ambient Operating Temperature**
Control Surface	between 50°F and 95°F (10°C and 35°C)
DioCore	between 50°F and 90°F (10°C and 32°C)

Warning

⚠ Warning

- Do not store or use the device at extreme temperatures, or in an environment with exposure to vibration, dust or humidity.
- Do not block the ventilation holes when operating the device. Blocked ventilation holes are a fire hazard. Be especially careful if you are using the console while it remains in the lower half of its flight-case.
- Do not place the device (console or audio rack) too close to strong electromagnetic radiation sources (video monitors, high-voltage cables, etc.), as this might cause a degradation of audio quality via induced currents in the connections and frame.
- Using a mobile telephone near the device may induce noise and disturbance.

Power

Both the Console and DioCore include two power supplies for redundancy (A and B). Only one supply is required, however, we recommend that you connect both power supplies in order to benefit from automatic redundancy during a live show.

⚠ Warning

Warning

- Connection of this equipment must be performed in compliance with the International Electrical Code (IEC 60950) and any additional safety requirements applicable to your installation.
- The power supply *must* be earthed. Grounding connectors are provided on all devices. If the power cord has a three-pin plug, it will provide sufficient grounding so long as the AC socket is grounded correctly.

For optimal performance, the earthing network should be free of noise and all earthing connections must originate from a central earthing point. It is recommended that you pull an extra earthing wire from each socket, and connect that directly to the central earthing point. This is the best way to ground all the devices of your installation.

Power Consumption & Voltage

The control surface and DioCore can be powered by a voltage between 90 and 253 volts AC, at 46-63Hz

The maximum power consumption of the DioCore is 300W.

⚠ Warning

Warning

Only supply the input voltages described.

System Connections

Having installed the control surface and DioCore, it’s time to connect up the system.

Pre-installed Connections

The system ships with the following pre-installed connections:

Note

- Network link between the Nova and M.A.R.S. control computers (Ethernet).
- Screen connections (VGA) to the touch-screen.
- Ethersound link between the console (**OUT** of the DioEs module) and M.A.R.S **IN**.

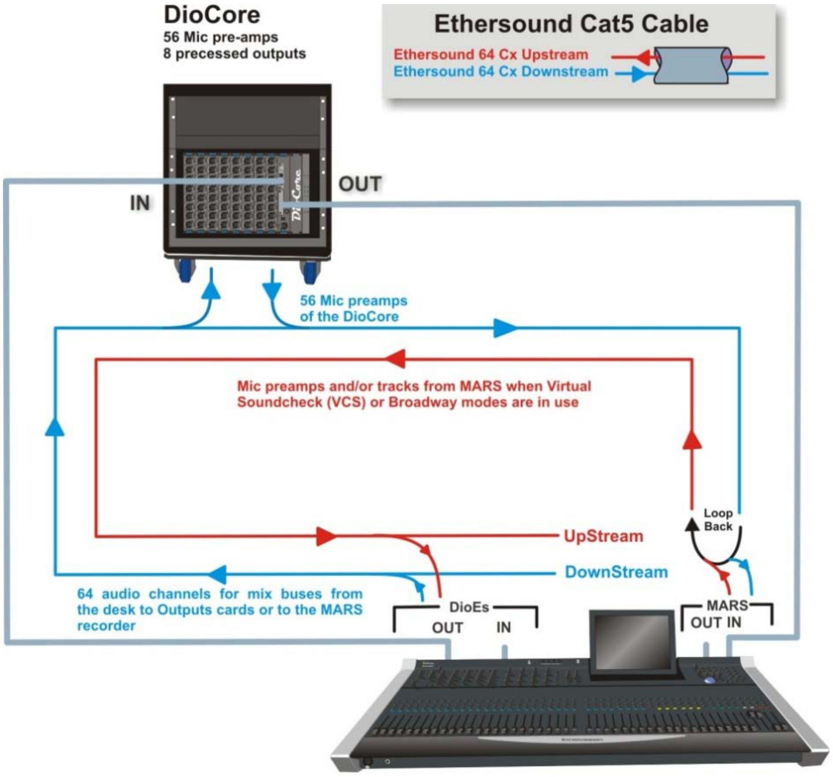
These connections allow you to play back a demo song from M.A.R.S. without connecting the DioCore. Simply apply power to the console PSUs and follow the instructions on Page 448.

Connecting the DioCore

To connect the DioCore, you must re-configure the Ethersound network.

Ethersound is a bidirectional interface, which can receive and transmit 64-channels of digital audio along a standard CAT5 network cable.

The diagram below shows the Ethersound connections and audio streaming for a standard Eclipse package:


DioCore
56 Mic pre-amps
8 processed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
Loop Back
UpStream
DownStream
64 audio channels for mix buses from the desk to Outputs cards or to the MARS recorder
DioEs
OUT
IN
MARS
OUT IN

Eclipse is the Primary Master of this network; M.A.R.S. is connected at the end of the chain.

Mic preamps from the DioCore are patched *downstream* onto the Ethersound channels so that they can be recorded to M.A.R.S.

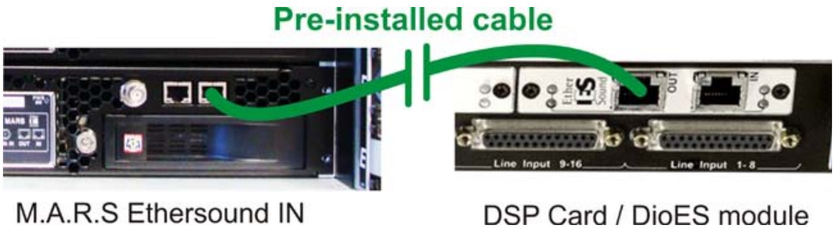
The Ethersound channels are automatically looped back to the console, and patched *upstream* to its input channels.

Mix busses from the console are patched *downstream* so that they will reach the DioCore or M.A.R.S.

In the unlikely event of a M.A.R.S. failure, the DioCore becomes the last device in the chain, and automatically loops the downstream data back onto the upstream path without any break in audio.

It is important to connect the **IN** and **OUT** Ethersound connections in the correct order:

1. Remove the pre-installed Ethersound cable from Eclipse (the **OUT** on the DioES module) to the MARS (**IN**):



2. Connect the Ethersound **OUT** from Eclipse (the **OUT** on the DIOEs module) to the **IN** of the DioCore.
3. Connect the Ethersound **OUT** from the DioCore to the **IN** of M.A.R.S.

Using a standard CAT5 cable, the length may be up to 100m.

When the Ethersound connection is correctly made, and receive and transmit devices are powered, then the 2 LEDs beside the connector flash synchronously.

By leaving the console's Ethersound **IN** connection free, the console becomes the Ethersound Primary Master device; this enables it to detect DioCores automatically and assign channels and data flow onto the Ethersound network.

See Page 263 for more details on networks, the Primary Master and Ethersound streaming.

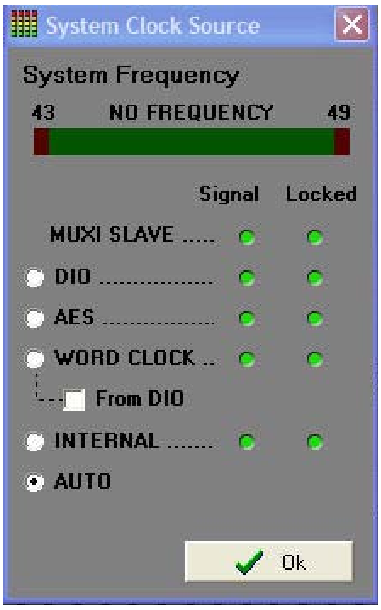
System Clock

Eclipse offers a fully redundant clock source structure with external clocking options (Wordclock or AES) and an internal sync generator. This allows the console to be clocked from a choice of sync sources and recover from loss of external sync.

To view and configure the clock source:

1. Select the "**UTIL -> System Clock Source**" menu path from the Nova software.

*This opens the **System Clock Source** window:*



- At the top of the window you will see the sampling frequency of the selected clock source.
- The green **Signal** LED turns red if a valid clock signal is detected.
- The **Locked** LED turns red when the system is locked to the source.

By default, the system clock is set to **AUTO**. In this mode, the available clock signals are analysed and locked to according to a priority algorithm : Internal, Muxi, WC, Dio.

The available clock sources are:

- **MUXI SLAVE** – this source is not optional; the system will automatically lock to this clock if you are receiving data from a StageBox.
- **AES** – select this option to lock to the **AES In** (XLR) port on the $MC_{optical}$ card at the rear of the console.
- **WORD CLOCK** – select this option to lock to the **Wc In** (BNC) port on the $MC_{optical}$ card at the rear of the console.
- **INTERNAL** – select this option to force the system clock to the internal sync generator.
- **AUTO** – select this option to return to automatic prioritisation.

Note

Note that for the sync source to be valid, it must operate with a sampling frequency between 43 and 49kHz.

2. Click on an option and press **OK.**

*The system will lock to the selected source; the **Locked** LED should turn red.*

Wordclock Out

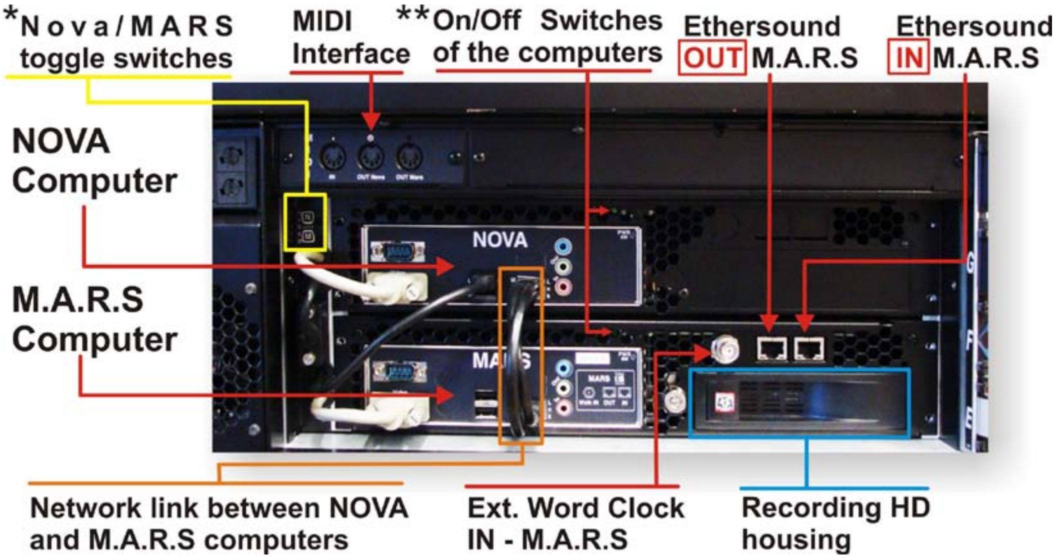
On the rear of the console, and on the DioCore, you will also find a **Wc Out** (BNC) connection. This will automatically follow the system clock, as selected above, and can be used to distribute sync to external devices.

Sync from DIO

This is a clock extracted from the Dio device which is installed in the DSP Dio slot. If the console is not the primary master (e.g. it is the first in a network of several consoles or DioCores), you will need to synchronise the console to the Ethersound clock generated by the primary master. Connect this BNC to the WC IN of the MCoptical card to achieve the desired result.

The Computers and Touch-Screen

At the rear of the console are the two control computers which run the Nova mix management and M.A.R.S hard disk recorder software:


*Nova/MARS toggle switches
MIDI Interface
**On/Off Switches of the computers
Ethersound OUT M.A.R.S
Ethersound IN M.A.R.S
NOVA Computer
M.A.R.S Computer
NOVA
MARS
Network link between NOVA and M.A.R.S computers
Ext. Word Clock IN - M.A.R.S
Recording HD housing

The Network link, Ext. Word Clock and SVGA connections should be left in place. They provide communication and synchronisation for M.A.R.S., and allow the touch-screen to be switched using the **NOVA** and **M.A.R.S.** buttons on the TRANSPORT panel.

A handbook for the built-in touch-screen is supplied with the console. This provides instructions for modifying the brightness, colour and other settings of the screen.

The MIDI Interface (**MIDI IN**, **OUT** and **THRU**) supports any MIDI compatible device conforming to the MIDI standard. See Chapter 7 for details on using MIDI with the console’s Play List, and Page 322 for details on sending MIDI program changes from the USER DEFINED panel.

* The Nova/MARS toggle switches can be used to force the KVM (Keyboard, Video, Mouse) interface into a specified position.

** The ON/OFF switches can be used to reboot one computer without disturbing the other. (You can also restart each computer from the console keyboard, see Page 500.)

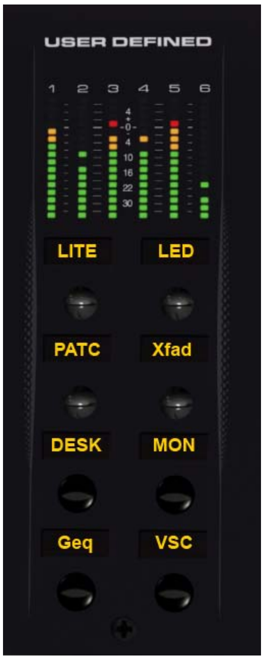
Note

Note that M.A.R.S. can be used as a backup for the Nova computer in the unlikely event of a failure. See Chapter 11 for details.

Littlelite Connectors

On the very top of the console you will find two 4-pin littlelite connectors.

You can control the brightness of these lights from a rotary control on the USER DEFINED panel, see Page 322.



Audio Connections

Eclipse's I/O interfaces use the standard audio connectors commonly found in professional audio.

Analogue-to-digital converters and digital audio connections operate at 24-bit, 48kHz, except the DI-8Src card which accepts sampling frequencies from 32kHz to 56kHz.

If you intend to use the standard template File, which is pre-installed on each console, then you should connect your audio devices according to Appendix A, see Page 508.

Alternatively, you can connect your devices as you wish, and then patch your inputs and outputs using the **PATCH IN** and **PATCH OUT** grids described in Chapter 6.

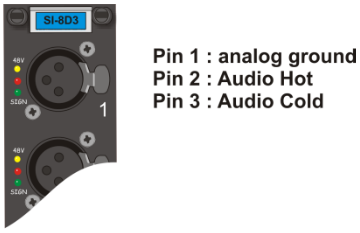
Warning

Warning

When the console powers on, settings from the last File are loaded. This may cause audio to pass through the console, so when connecting amplifiers, headphones, etc. make sure that they are turned off or at a safe level.

SI-8D3 Cards (standard)

This card provides 8 mic/line inputs. Every input cable should be wired as follows:



Each of the female XLR connectors allows connection to an electronically balanced universal preamp, which accepts signals with levels between -51dBu and +26dBu. Each preamp can be controlled from the console; the available gain range is from -27 to +63dB, in 1.5dB steps.

The phantom power may be turned on/off independently, channel by channel. Phantom power can be generated by the input module itself (limited to 6mA) or from an external source (e.g. mic power supply, analog console, etc.). When using an external source, do not turn on 48V for the input as this could prove destructive.

The yellow LED next to the connector indicates the presence of 48V (internal or external phantom power supply).

The green and red LEDs indicate signal presence and signal overload respectively.

The output of the preamp feeds a 24-bit Delta-Sigma analogue-to-digital converter.

DI-8S Cards (optional)

This card provides 4 synchronous AES inputs (8 mono channels) on balanced XLR-F connectors.

DI-8Src Cards (optional)

This card provides 4 asynchronous AES inputs (8 mono channels) on balanced XLR-F connectors. Each has its own SRC (sample rate converter) and accepts AES signals from 32kHz to 56kHz.

UM-8PO Cards (standard)

Each UM-8PO card provides 8 processed outputs on balanced XLR-M connectors (either 8 analogue or 4 AES outputs) and an optical TosLink connector (8 ADAT outputs).

Each UM8 output provides full DSP processing, see Page 173, with output gain adjustable from +10.5 to +22dBu.

Use the DIP switches on the top of the card to configure each pair of XLR outputs as:

- Two analogue channels (one on each XLR)
- Two AES channels (on one XLR).

For example, if the first switch is positioned to the AES side, XLR 1 is disabled while XLR 2 provides 2 AES/EBU channels. You can configure XLRs 1/2, 3/4, 5/6 and 7/8 in any combination.

LEDs are provided for:

- **OVL** - Overload (red) LED – indicates that the input signal it too hot.
- **Signal (green) LED** – indicates signal is present.
- **AES** – indicates that the XLR pair is configured for AES operation.

FM-8VB Cards (standard)

This card provides 8 channels of internal effects. There are no audio i/o connections on these cards, as they provide internally routed effects.

Each card includes a ¼” jack connector (TAP TEMPO) which is reserved for future implementation.

DSP Card Line I/O (standard)

This card includes 16 Line Inputs and 16 Line Outputs (without DSP) on four DSub connectors.

Every line level input is electronically balanced and feeds a 24-bit Sigma-Delta A/D converter directly. The nominal input level is fixed at 4dBu with scale is at 22dBu. It is not possible to alter this.

Four XLR interface cables are supplied with the console to provide balanced XLR-F and XLR-M connections to the 16 I/O.

Headphones and Talkback (standard)

On the front of the console you will also find:

- ¼" stereo jack – headphone output.
- XLR – talkback input.

These connections are used for the console's Headphone monitoring, see Page 210, and engineer talkback, see Page 218.

Switching on the Power

The console and DioCore may be powered in any order:

1. Power on the DioCore – the unit does not have an overall power switch so turn on each of the mains leads connected to the A and B power supplies.

The PSU status LEDs at the front of the unit will turn green for correct operation.

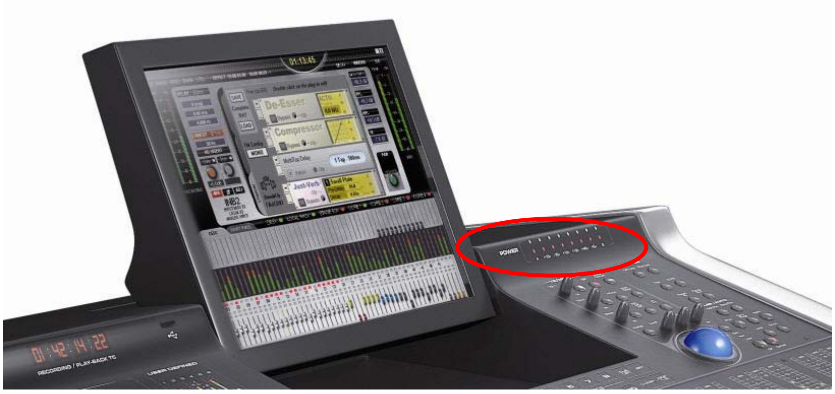
2. Power on the console using the two switches on the rear panel.

Warning

Warning

When the console powers on, settings from the last File are loaded to the Nova mix management software. This may cause audio to pass through the console, so make sure that any devices connected to the system (e.g. amplifiers, headphones, etc.) are turned off or at a safe level.

The POWER status LEDs on the front panel of the console should turn green for correct operation:



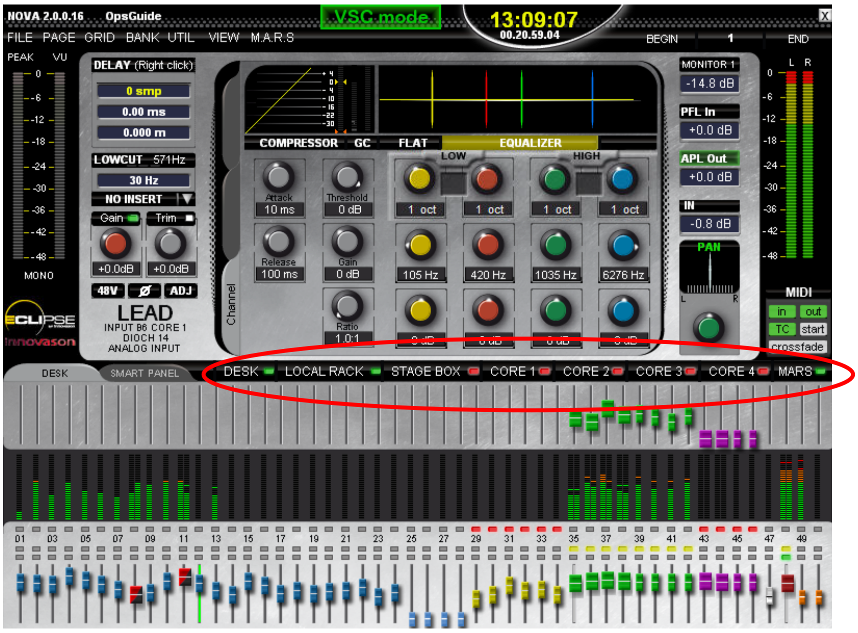
If an LED is red, then the power supply or voltage rail has failed. Please consult the “Eclipse Technical Manual” for further details.

The console may take between 30-60 seconds to boot, depending on the last File loaded and I/O configuration. During this time you will see the boot-up progress on the Nova display, and periodically the console’s VU meters flicker.

Applying power to the console also boots the M.A.R.S. control computer. M.A.R.S. boots with the **MT128 Project Manager** window open. See Chapter 10 for details on loading and playing back a project.

Checking the Hardware Status

At the end of boot-up, settings from the last File are loaded, and the Nova screen shows the Main Mix display. You will see the status of the hardware components in the middle of the display:



- **DESK** – the control surface.
- **LOCAL RACK** – the console rear cards.
- **STAGE BOX** – a remote Muxipaire StageBox (optional).
- **CORE 1** to **CORE 4** – up to 4 remote DioCores (Core 1 is standard).
- **MARS** – the M.A.R.S. hard disk recorder.

The LEDs turn green if the device is powered and communicating correctly.

If the status LED is red, then there is a problem; check your connections and power.

Note

Note that for **CORE 1** to **CORE 4** and **MARS**, the status LED may be red if the device is not recognised on the Ethersound network, see Page 270. Also, a third status colour (orange) indicates a data error; check your Ethersound connections and cable length.

The **MARS** LED may also be red if MARS has not booted correctly. Reboot the M.A.R.S. control computer, see Page 496.

Chapter 3: Operating Principles

Introduction

This chapter covers the operating principles of the **Eclipse** surface and **Nova** management software. If you have limited time to learn the console, then read this chapter first followed by Chapter 4 which provides a “Getting Started” guide to loading and working from the standard template File.

To mix on **Eclipse** there are three principle control areas you will use:

- The Fader and Smart Panel Strips
- The Selected Channel (EQ, Dynamics, etc.)
- The Nova Main Mix display

This chapter describes each control area and explains the principles of the Nova displays.

Tip

Load the demo song on M.A.R.S. to work with some real audio while reading this chapter. See Page 448.

Fader Strips and the Smart Panel

Eclipse provides 48 Fader strips plus 48 Smart Panel rotary controllers (available in 4 layers: A, B, C and D). Each may control any input, output (Aux, Group, Master or Matrix) or act as a VCA or Smart Fader.

IDs

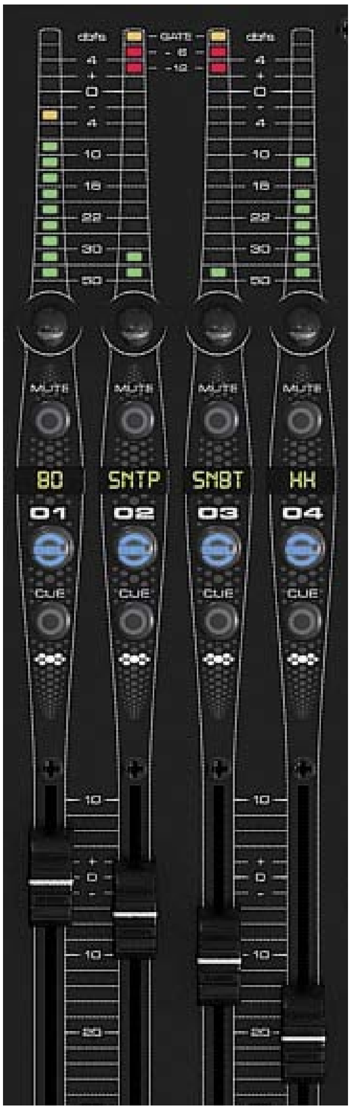
To help identify the different channel types, each strip has a colour coded ID: inputs (blue), Auxes (green), VCAs (yellow) and so on:

The IDs are colour coded as follows:

- **Input Channels** – Blue
- **Smart Faders** – Light Blue (almost white!)
- **Groups** - Pink
- **Auxes** – Green
- **Masters** – Red
- **Matrices** - Violet
- **VCA Masters** – Yellow
- **Monitoring Level** – Orange
- **Crossfade Time** – White

Fader Strips

Each Fader strip provides:



VU Metering

On input channels metering is always pre-fader and can be switched pre or post processing from the “**Util -> General Preferences**” window, see Page 428. The meter also shows Gate activity.

On output channels (Aux, Group, Master, Matrix) the meter shows the post-fader mix bus level; this meter point is before any output card (UM-8PO) processing.

If the input or output is stereo, then the meter displays the left channel.

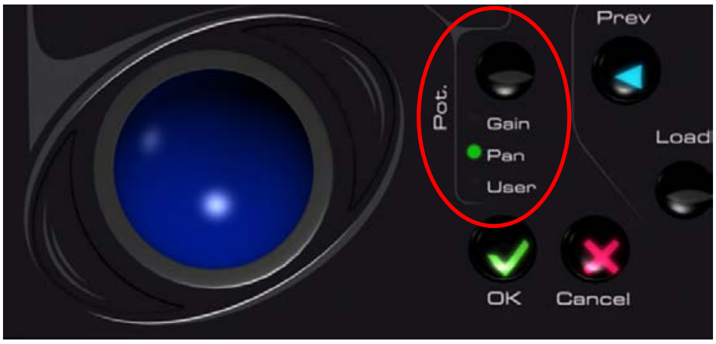
On VCAs the meter has no function.

On Smart VCAs you will see the highest level of any slave channel. For example, if you have a Smart VCA controlling your drum mics, whichever input is loudest will be displayed on the Smart VCA meter.

You can change the meter ballistics from the “**Util -> General Preferences**” window, see Page 428.

Gain, Pan or User Rotary Control

The function of the rotary control is switched globally using the **Pot.** button beside the trackball:

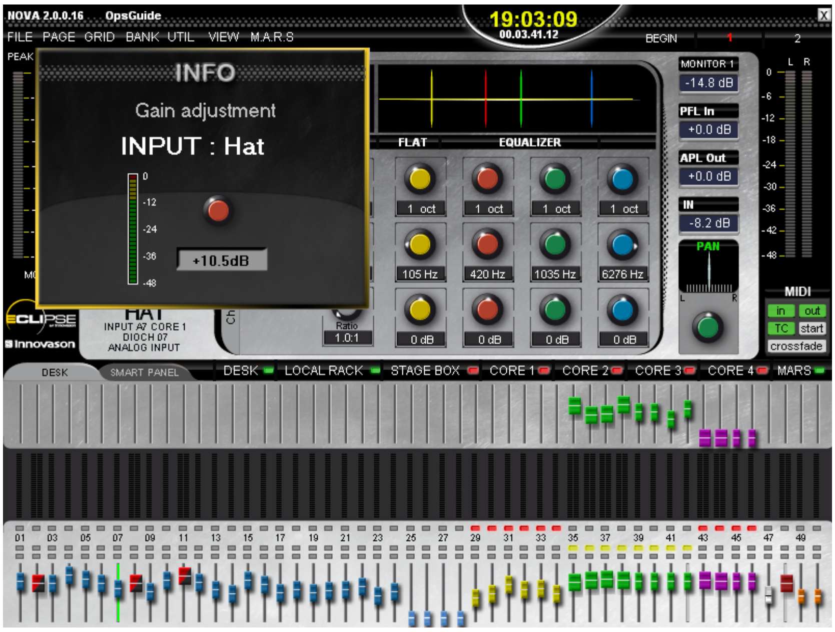


1. Press the **Pot.** button to cycle through the three options: **Gain**, **Pan** or **User** defined.

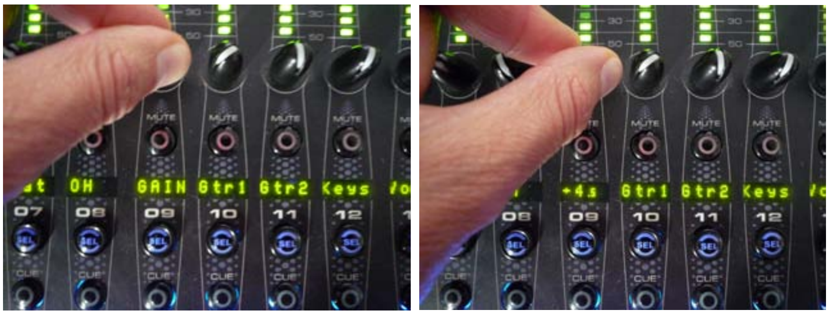
A green LED indicates the selected mode.

2. Turn the pot on a Fader strip to adjust the parameter.

An INFO pop-up appears with feedback on the function – in our example, we have adjusted the Gain for the input channel labelled Hat:



You will also see the name of the parameter (e.g. GAIN) followed by the value in the Fader strip Label display as you turn the control:



Note

Note that you can customise each of the three **Pot.** modes:

- **Gain** – can control either analogue Gain or digital Trim.
- **Pan** – can be dependent (panning to all stereo busses) or independent (panning to the selected bus). The control adjusts left/right pan on mono channels and balance/width on stereo channels.
- **User** – can be assigned to any variable parameter (see Page 120).

For details on **Pot.** configurations, please see Page 123.

On VCA Fader strips, the rotary control has no function.

On Smart VCA Fader strips, **Gain** adjusts the active slave channel; this is the slave with a fully lit Label, see Page 156. **Pan** controls the composite Pan, see Page 155.

MUTE

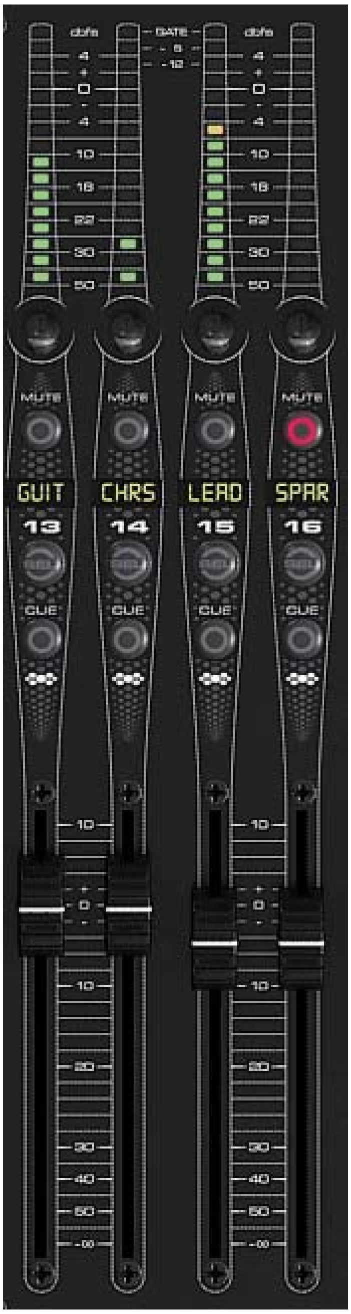
1. Press the **MUTE** button to mute the channel.

On input channels, **MUTE** affects all post-fader mix bus assignments; any pre-fader Aux sends are not affected.

On output channels, the **MUTE** button mutes the channel output. This includes any post-fader bus assignments. For example, if the Master is feeding a Matrix, you will mute the Matrix send.

On stereo channels, VCAs and Smart VCAs, the **MUTE** button mutes all slave channels. Note that the VCA **MUTE** will not override any existing slave channel **MUTE**s. This is indicated on the slave channels as follows:

- **MUTE** flashing – the channel is muted *only* by the VCA. When you unmute the VCA, the channel **MUTE** cancels.
- **MUTE** steady state - the channel **MUTE** is active; it will not be affected by the VCA **MUTE**. To unmute the channel you must unmute both the VCA and the slave.



Label

The 4-character user Label can be entered by selecting the channel (press **SEL**), and then pressing [**F3**] on the console keyboard. Type in a name and press **OK** to confirm.

On input channels, the Label shows:

- the input Label (e.g. **MIC1**)
- Or, if the channel is not patched, the generic channel name: e.g. **IN**.

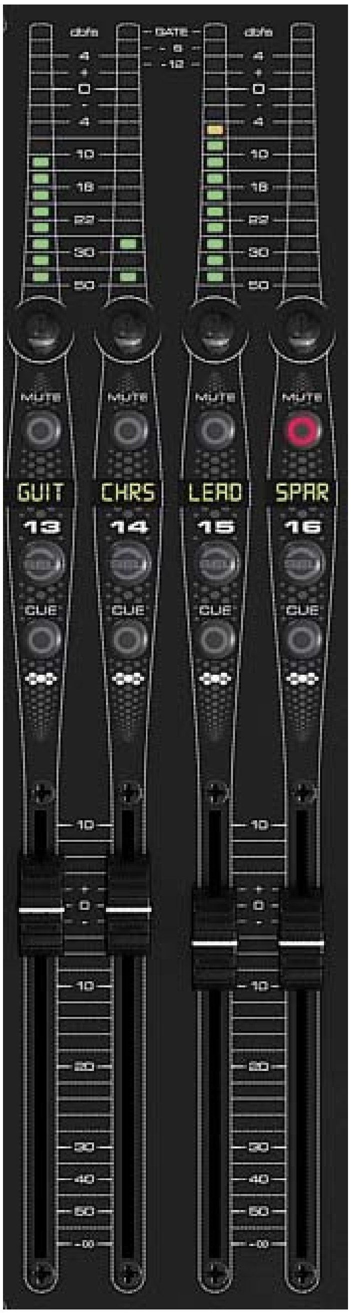
On output channels, the Label shows:

- the output Label (e.g. **SPK1**).
- Or, if the bus is not patched, the generic mix bus name: e.g. **AUX**, **GRP**, **MST**, **MTX**.

On stereo channels, VCAs and Smart VCAs, you will see the channel Label; the default channel Label displays the channel type (e.g. SIN = stereo input, SAUX = stereo aux, VCA = VCA!).

See Page 200 for more details on Labels.

Note that on Aux channels, the name of the Personal Mix (e.g. John) takes priority over the channel Label if a Personal Mix is loaded. See Page 387 for details.



SEL (Select button)

1. Press **SEL** to select the channel; the **SEL** button and Label flash.

Selecting a channel performs two functions:

- It assigns the channel to the Selected Channel controls so that you can adjust EQ, Dynamics, etc.
- It displays bus routing – any steady state **SEL** buttons are routed to, or from, the selected channel.

Note that *both* routing and sends are set in one operation. This means that the console's faders can be controlling either:

- the **main level** of the channel.
- Or the **send level** from the channel to an Aux or Matrix.

The mode depends on which type of channel is selected (input, Aux, Master, etc.). See Page 74.

CUE

1. Press **CUE** to cue the channel.

On input channels, **CUE** may operate as PFL, AFL or SIP (Solo-in-Place).

On output channels, **CUE** may operate as PFL, AFL or APL (After Processing Listen).

On stereo channels or Smart VCAs the button activates **CUE**s on all slave channels. Note that this will *only* work if all slave **CUE**s are in the same state – either all on or all off.

You cannot **CUE** a VCA.

CUEs on output channels always intercancel; on input channels, you can select intercanceling or additive **CUE**s.

Cue options are set from the TB/MONITORING panel, which includes a **CUE Clear** button. See Page 206.

ID

The colour-coded LED identifies the channel type – input, Aux, Master, etc. See Page 58 for a full list of colours.

Fader

The Fader is touch-sensitive and motorised. It may control *either* the main channel level *or* an Aux/Matrix send level depending on which type of channel is selected.

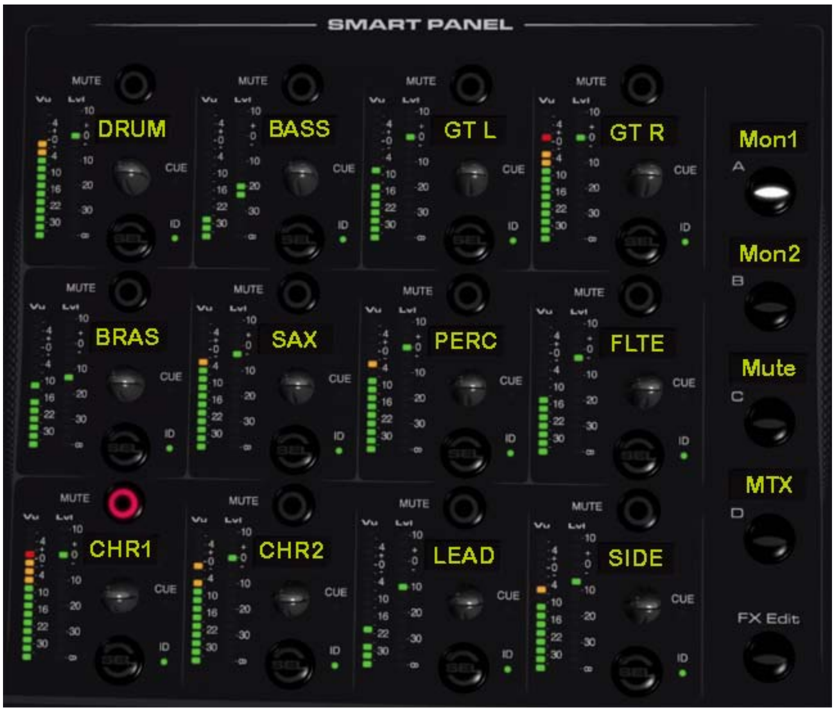
Tip

When you touch a fader its level, in dB, can replace the Label (defined from "**Util -> General Preferences**", see Page 428.)

Each fader also has a notch which you will feel when you move the fader. This indicates the last level you set for the channel, and is a great way to tell if your mix is getting louder or quieter!

Smart Panel “Strips”

The Smart Panel provides 4 layers of 12 rotary controls, that’s an additional 48 control “strips”:



1. Press the **A**, **B**, **C** or **D** buttons to page through the four layers.

Each time, a different set of 12 channels are mapped onto the Smart Panel controllers.

2. Press **FX Edit** to assign any internal effects processing controls onto the Smart Panel. See Page 301.

Note

Note that the Smart Panel is also used to control the left, right and centre components of a stereo channel when in **EDIT** mode, see Page 189. And, it is used to make selections when using functions such as **Smart Link** mode, see Page 411. Whenever you cancel these functions, the panel returns to its default operation.

Labelling the Smart Panel Layers

Each of the **A**, **B**, **C** and **D** buttons has a 4-character Label to name the Smart Panel layer. To change the Label:

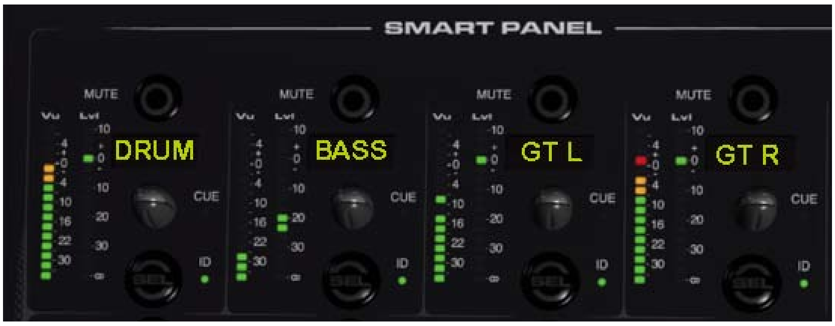
1. Press and hold the layer button – e.g. **A**:

*The **Smart Layer Name** pop-up appears.*

2. Type in a name (up to 4 characters) from the console keyboard.
3. Press **OK** or [**ENTER**] to confirm.

*The new Label appears beside the **A** button.*

Smart Panel Controls



The operation of each Smart Panel controller is very similar to a Fader strip; the following functions are identical:

- **VU Meter**
- **MUTE**
- **Label**
- **SEL**
- **ID**

Level and CUE functions are operated as follows:

⏩ Level Control and Lvl Indicator

1. Turn the rotary control to adjust channel level.

*The **Lvl** meter indicates the current level using a single green LED.*

As for Fader strips, the Smart Panel rotary controls may adjust either the main channel level *or* an Aux/Matrix send level.

⏩ CUE

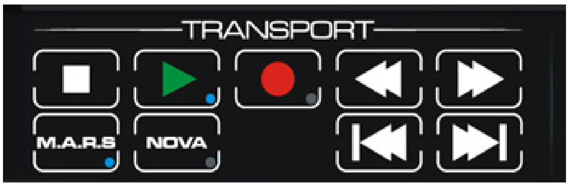
1. Press down on the rotary control to turn Cue on or off.

*When active the **CUE** LED lights.*

Note that a Smart Panel “strip” has no separate rotary control for Gain/Pan/User. To control these functions, you must assign the Smart Panel controller to the Selected Channel.

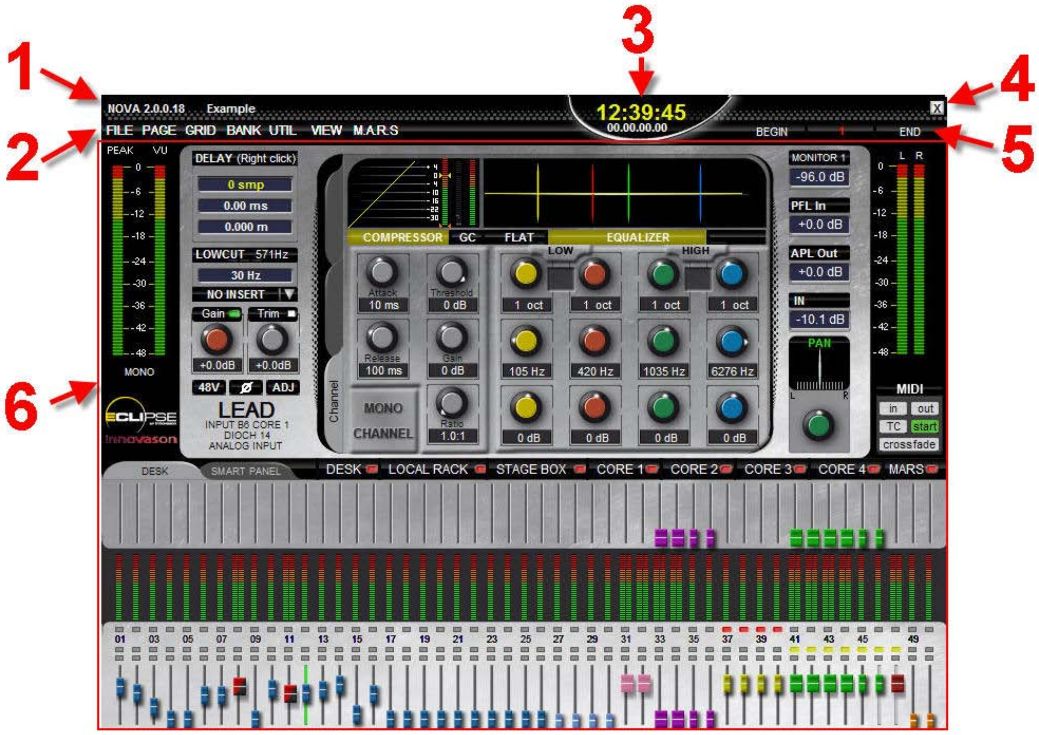
The Nova Touch-Screen

The console touch-screen, trackball and keyboard can be switched between two different control computers from the TRANSPORT panel:



- **NOVA** – the Nova mix management software.
- **M.A.R.S.** – the M.A.R.S. hard disk recorder software (see Chapter 10).

1. Press **NOVA** to switch control to the Nova displays:

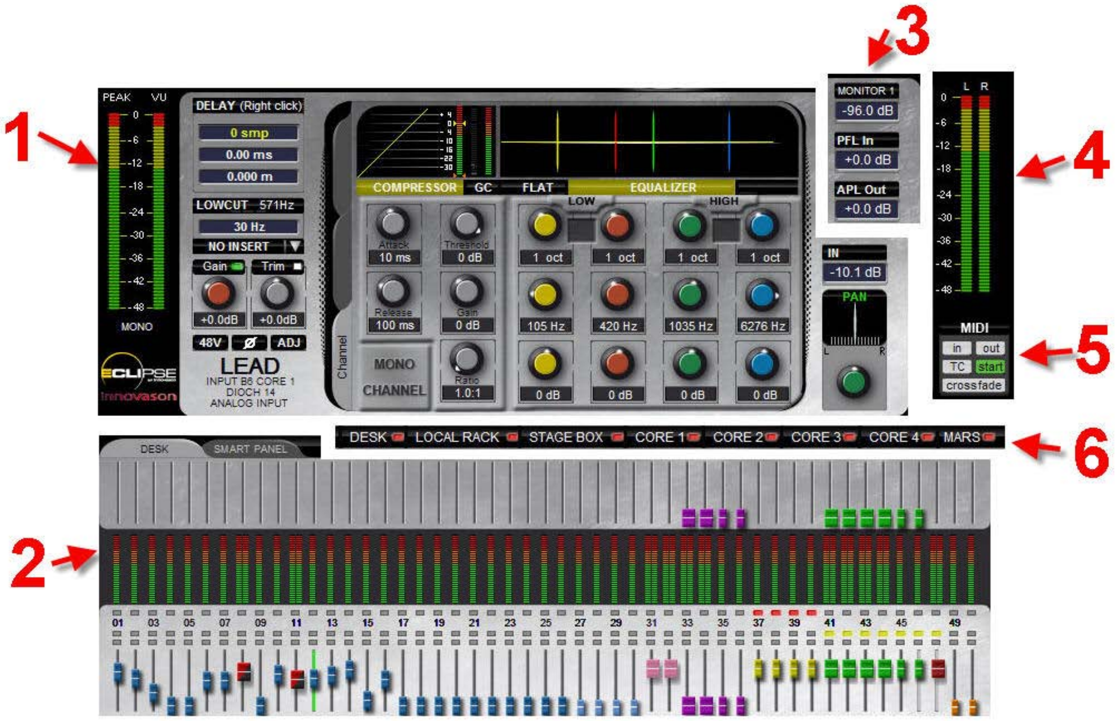


Each Nova display includes the following components:

1	**File Name (or Display name)**	In the Main Mix display, this area shows the software revision (**Nova 2.0.0.18**) and active File name (**Example**). If you select a different display, then you will see its name – for example, **PATCH IN**, **PERSONAL CONSOLE BUILDER**, etc.
2	**Main Menus**	The 7 main menus (**FILE**, **PAGE**, **GRID**, **BANK**, **UTIL**, **VIEW**, **M.A.R.S.**) provide access to all Nova displays and a number of menu-driven functions. Use the trackball to left-click on a main menu; the sub menu options appear.
3	**Clock & Timecode**	The clock shows local time; double-click to adjust. The timecode shows either M.A.R.S. or external MIDI timecode.
4	X	Click on the **X** to quit the Nova software (shut down the console).
5	**Previous Current & Next Page**	Here you will see the Previous, Current and Next Page names. In our example, we have a single page – **1** – loaded from the File named **Example**. The names **BEGIN** and **END** indicate that nothing will load if we select the **NEXT** or **PREV** Page buttons. See Chapter 7 for details on using Page automation.
6	**Display Area**	Most of the screen is used for the selected display – in our example, Main Mix. You can use UTILITIES buttons, the trackball or keyboard to open up different displays such as **PATCH IN**, **PATCH OUT**, etc. Note that the Main Mix, shown above, acts as the default display. Think of this as 'home'.

The Main Mix Display

This display provides a graphical overview of your complete mix. Other displays can be opened within the display area but when you close them you will *always* return to the Main Mix.



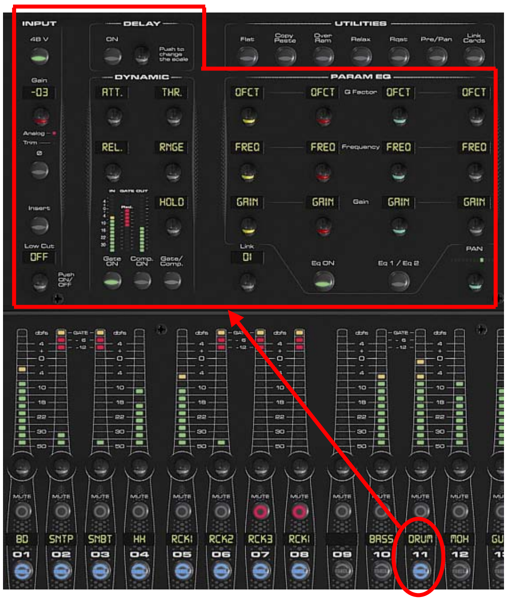
The Main Mix display can be split into the following sections:

1	**The Selected Channel**	This area shows parameters for the selected channel (**SEL** button flashing). Here you can view processing such as the Compressor, Gate and EQ as you adjust the front panel controls.
2	**DESK/SMART PANEL Overview**	The lower half of the display provides an overview of main levels, VU metering and send levels (Aux or Matrix sends) for the **DESK** (the 48 Fader strips) or the **SMART PANEL** (the 48 Smart Panel controllers).
3	**Monitor Levels**	This area shows the monitor level and AFL, PFL or APL levels for the currently selected monitor output. It works in conjunction with the TB/MONITORING front panel controls. See Page 206.
4	**Master Metering**	The VU meters *always* meter the Master output level (either Mono, Left/Right or LRC depending on the format).
5	**Automation Status**	This area displays the status of the console's Page automation. See Chapter 7 for details.
6	**Hardware Status**	This strip of LEDs displays the status of the system. LEDs are green if the hardware component is operating correctly. See Page 56.

Let's look at the Selected Channel and DESK/SMART PANEL overview in more detail.

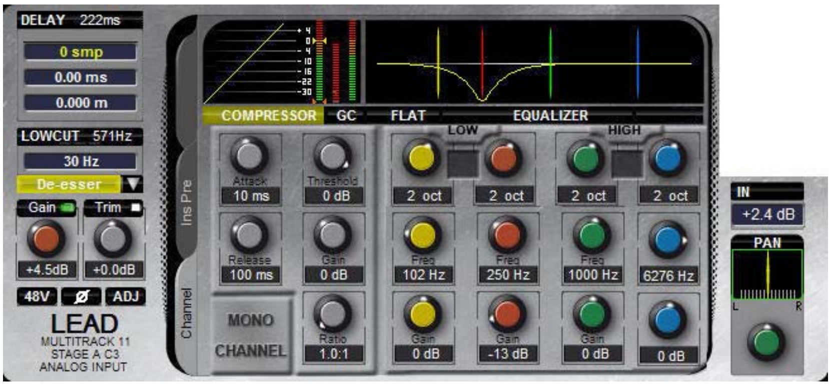
The Selected Channel

To the left of the SMART PANEL are the INPUT, DELAY, DYNAMIC, PARAM EQ and PAN sections. Together these form a “channel strip” for the selected Fader or Smart Panel controller:



Once a **SEL** button is active (flashing), the Selected Channel offers direct control of *all* settings – gain, insert switching, low cut filter, delay, dynamics, equalisation and panning.

The controls work in conjunction with the Main Mix display which provides graphical feedback on parameters:



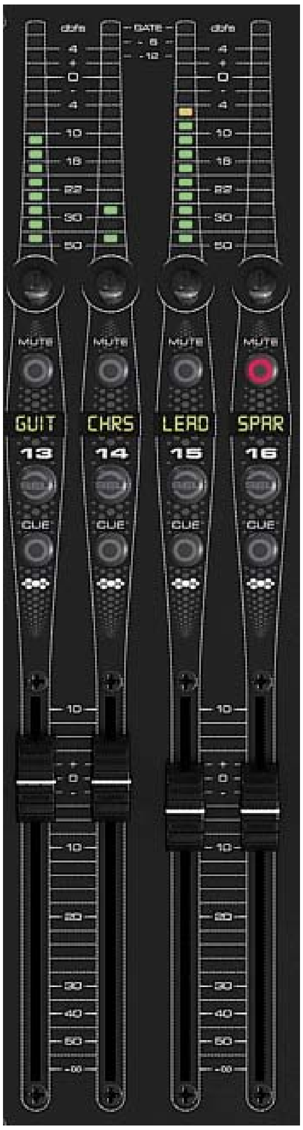
So to adjust EQ on an input channel:

1. Press **SEL** on the input Fader or Smart Panel strip.

*The **SEL** button and Label on the input should be flashing.*

2. Reach up to the PARAM EQ panel and adjust the EQ controls.

Any changes you make are shown on the Main Mix display shown above.

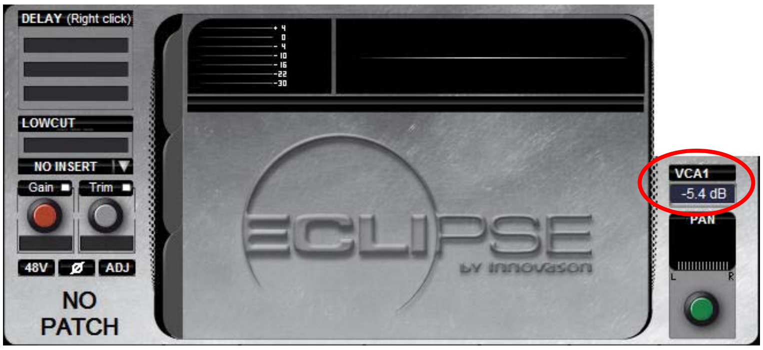


Note that what you see varies depending on whether you select an input, output or control channel such as a VCA:

VCAs

1. Press **SEL** on a VCA channel (yellow ID):

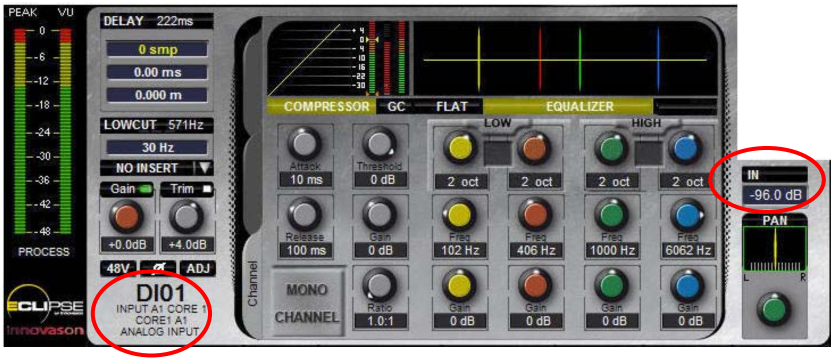
On a VCA there is no processing so the only information shown is the channel type (**VCA1**) and main level (**-5.4dB**):



Input Channels

1. Press **SEL** on an input channel (blue ID):

The channel type updates to **IN**, and the Label area shows the user Label of the input patched to the channel (e.g. **DIO1**):



The display now shows all the parameters available for the input channel. Buttons highlighted in yellow are on; those in black are off. In our example, both the **COMPRESSOR** and **EQUALIZER** are turned on.

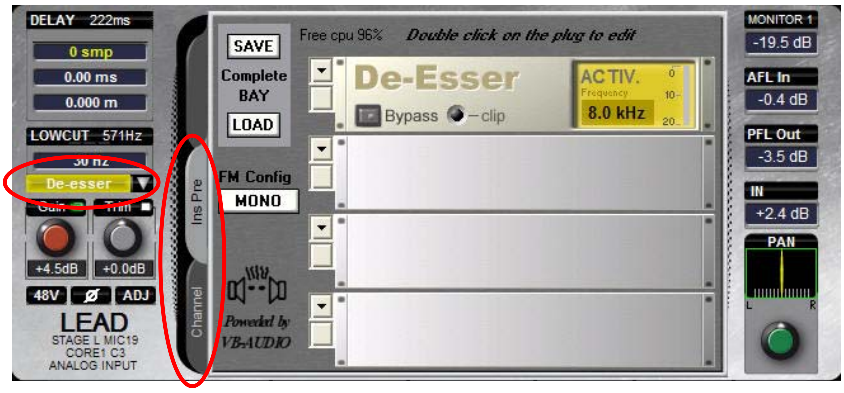
Push-button parameters, such as **48V**, and rotary controls, such as **Gain**, can be adjusted from the display as well as the console surface, see Page 87.

Tabs in the middle of the display are used to show different sets of processing. For example, on an input channel which has an insert device assigned you can tab between:

- **Channel** processing – the Compressor, Gate and Parametric EQ available on all 104 input paths.

- **Insert Pre** – processing which has been inserted pre-fader. This could be an external device or an internal effects bay.

On this input channel an internal effects bay has been inserted and can be viewed by clicking on **InsPre**:

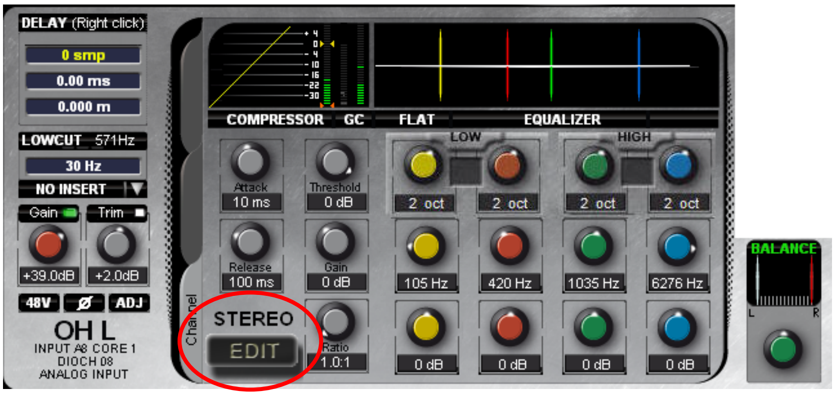


Tip

A switch on the User Defined panel can be assigned to cycle through the tabs, see Page 322.

Note

Note that if the input channel is stereo, then the text **STEREO** appears beside the **Channel** tab:

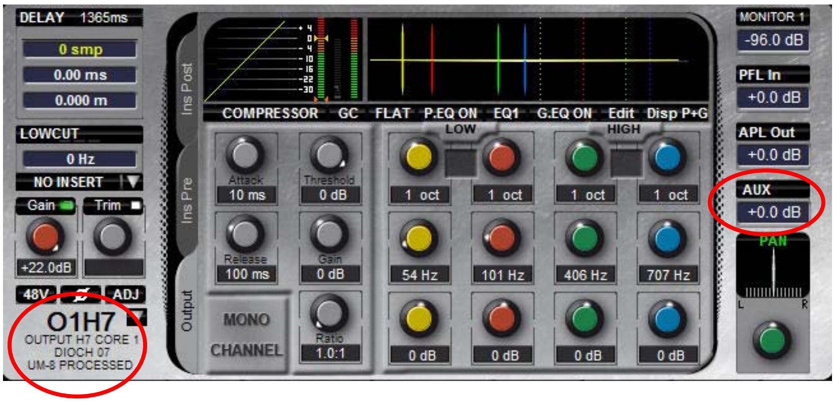


You can deploy the left and right components of a stereo input to the Smart Panel using the on-screen **EDIT** button, see Page 189 for details.

⏩ Output Channels

1. Now press **SEL** on an output channel (Aux, Group, Matrix or Master):

The channel type shows the type of output (e.g. **AUX**), and the Label shows the first output patched from the bus (e.g. **O1H7**):

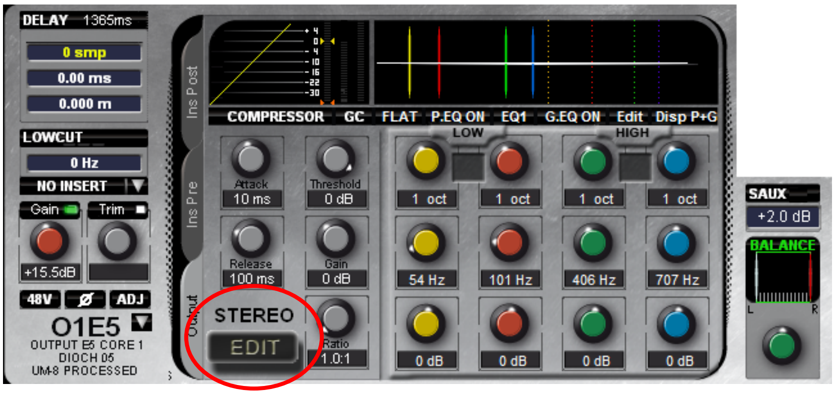


On output channels you can tab between the following processing:

- **Output** processing – this is processing applied at the physical output. For example, if the output is on a UM8-PO card you will see the Compressor, Gate, Parametric and Graphic EQ supplied by the UM8 card.
- **Insert Pre** – processing which has been inserted pre-fader. This could be an external device, one of the 16 floating DSP resources or an internal effects bay.
- **Insert Post** – post-fader inserted processing which could be an external device, one of the 16 floating DSP resources or an internal effects bay.

A switch on the User Defined panel can be assigned to cycle through the tabs, see Page 322.

Note that if the output is stereo, then the text **STEREO** appears beside the **Output** tab:



You can deploy the left, right and centre components of a stereo output to the Smart Panel using the on-screen **EDIT** button, see Page 189 for details.

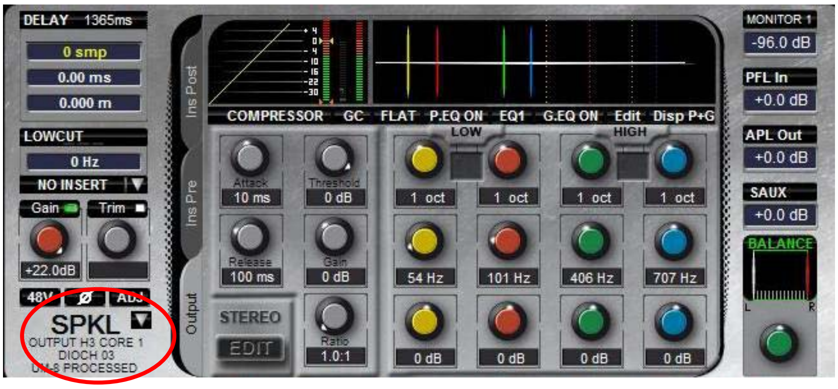
A mix bus may be patched to more than one destination. When this is the case:

2. Press the **SEL** button on the output channel to step through each of the destinations.

You will see the output patch name – e.g. ***SPKL*** *– and any output processing update accordingly.*

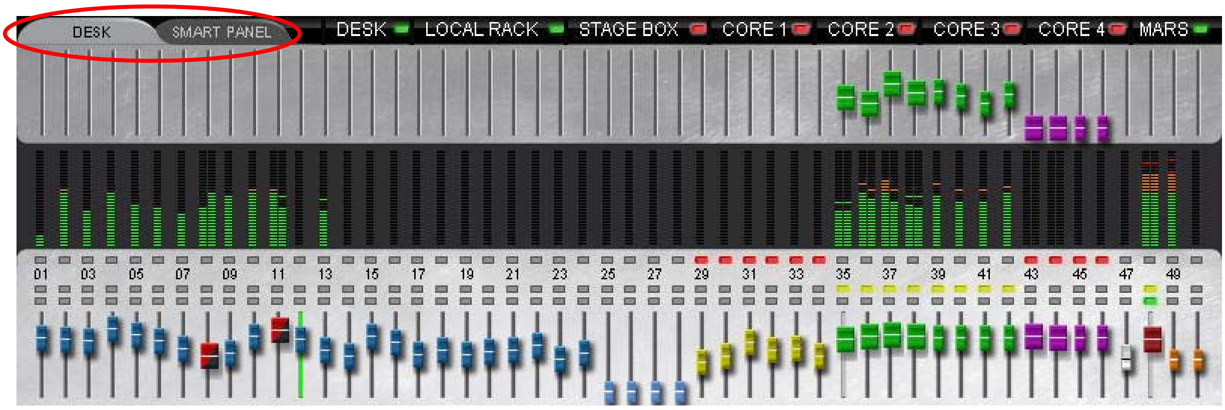
Note

Note also that on Aux channels, an arrow appears beside the patch name. This provides access to Personal Mixes which may be loaded to any Aux in order to recall personal monitor mixes for specific musicians, see Page 387.



The DESK/SMART PANEL Overview

The lower half of the Main Mix display provides a visual overview of your mix. It can be switched to show the **DESK** (Fader strips 1 to 48) or **SMART PANEL** (controllers 1 to 48):



To help identify different channel types, each fader is colour coded. Blue faders are mono inputs and red/black faders are stereo inputs. The remaining colours follow the ID colours, see Page 58.

Note that the selected channel is shown with a green fader track – in our example, input Fader **12** is the selected channel.

Note

Working from top to bottom, the display shows:

- **Send levels** – the upper row of faders shows the level of Aux (green) or Matrix (violet) sends from the selected channel.
- **VU metering** – identical to the VU meters on the console surface. If a channel is stereo, then the screen VUs meter both left and right components.
- **MUTE** status – any red buttons indicate that a channel is muted. For example, faders 29 to 34 are muted.
- **Fader number** – 1 to 48 for visual reference only. Faders 49 and 50 represent the monitor output level set on the TB/MONITORING panel.
- **Bus Routing** – any yellow buttons indicate bus assignments from the selected channel. In our example, the selected input fader is routed to Auxes controlled from faders 35 to 42.
- **CUE** status - any green buttons indicate that a channel CUE is active.
- **Main levels** – the lower row of faders shows the main level of each channel. Note that stereo faders are wider than mono faders, so in our example we can see that the first four Auxes are stereo.

Note that the display changes as you change the selected channel to provide forward or reverse interrogation of routing and send levels.

Routing, Sends and the SEL Button

Eclipse uses a reciprocal routing system. Both bus routing and sends are set in one operation. This means that the faders (or Smart Panel controllers) can be operating in one of two modes:

- Controlling the **main level** of the input channel or mix bus master.
- Controlling the **send level** from the input channel or mix bus master to an Aux or Matrix send.

The mode of each fader depends on which type of channel is currently selected (**SEL**) so let's take a couple of examples.

Note

Note that this default fader mode (Dual) can be altered from the "**Util -> General Preferences**" window, see Page 428.

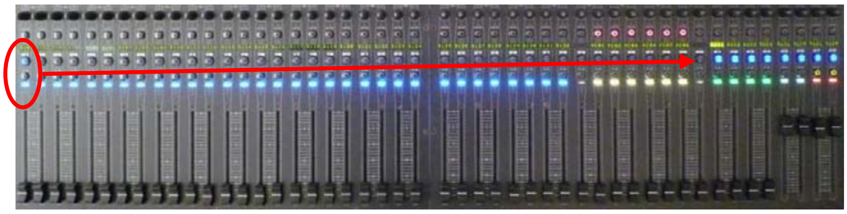
Routing from an Input (Forward Bus Assign)

1. Press **SEL** on an input fader (blue ID) – e.g. Fader 1.

*The **SEL** button and Label should be flashing.*

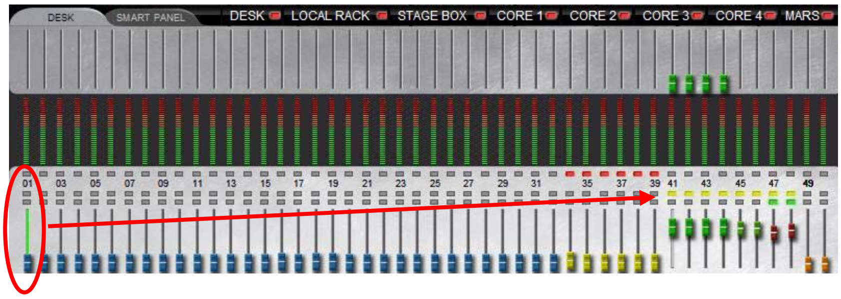
2. Look across the console at the status of the **SEL** buttons on your output channels (Aux, Group, Master or Matrix):

Any steady state **SEL** buttons indicate bus assignments from the selected channel - in our example, the input fader is routed to some Auxes and the stereo Master:



3. Look at the **DESK** overview on the Main Mix display.

The same assignments are shown with yellow routing buttons:



To change the routing:

4. Press and hold the flashing **SEL** button on the input fader while you press the **SEL** buttons on your outputs.

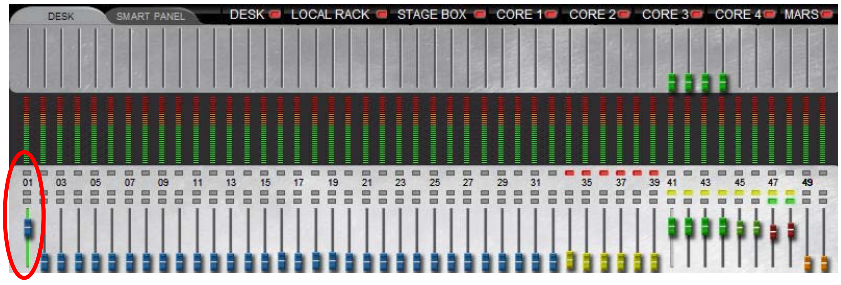
- **SEL** lit steady state = assigned.
- **SEL** unlit = not assigned.

Tip

You can route to multiple outputs in one operation using the multiple assign method described on Page 78.

5. Now move your selected input fader – you are controlling the **main level** of the input channel.

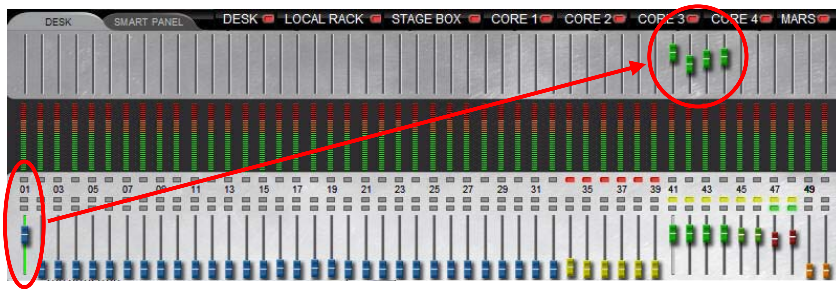
You can confirm this by looking at the Main Mix display:



6. Move your Aux faders – in our example, 41 to 44.

Note

Rather than controlling the Aux master levels, these faders are adjusting the Aux send levels from the selected input. You can confirm this by looking at the upper row of faders:



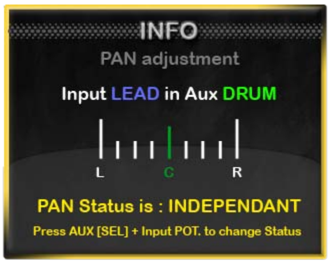
7. Now select a different input channel.

Notice how the Aux faders jump. This is because they are now controlling the Aux send levels from a different input.

Tip

This is a great way to work for Front of House where you may be using your Auxes to feed some effects. Simply press the **SEL** button on each input and reach out for the Aux faders to set the levels sending to each effect.

Note that Aux sends can be pre-fader, post-fader or independent of channel panning. If panning is independent and you have an input channel selected, then turning the Pan control on a stereo Aux sets the pan for the aux send. See Page 164 for details.


INFO

PAN adjustment

Input LEAD in Aux DRUM

PAN Status is : INDEPENDANT

Press AUX [SEL] + Input POT. to change Status

You can also set a **General Preferences** option so that when an input is routed to an Aux, the Aux send is automatically set to 0dB, see Page 428.

Routing to an Aux (Reverse Bus Assign)

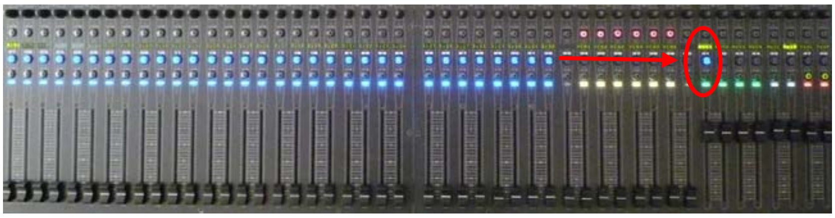
Now let's reverse the thinking and imagine we are mixing Monitors where each Aux is feeding a different wedge speaker on the stage. Having set up our main channel levels, it would be nice to quickly set an Aux send mix to each Aux output:

1. Select an Aux fader (with a green ID).

*The **SEL** button and Label on the Aux fader should be flashing.*

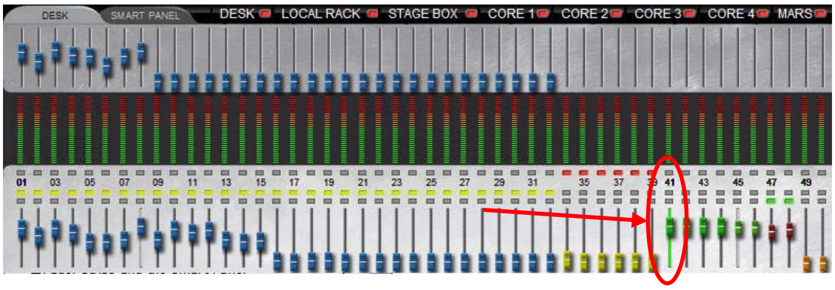
2. Look across the console at the status of the **SEL** buttons on your input channels:

Any steady state **SEL** buttons indicate bus assignments to the selected Aux - in our example, a range of input channels are assigned to the Aux:



3. Look at the **DESK** overview on the Main Mix display.

The selected Aux is highlighted in green, and bus assignments to it are shown by the yellow routing buttons:



To change the routing:

4. Press and hold the flashing **SEL** button on the selected Aux and then press the **SEL** buttons on the input faders:

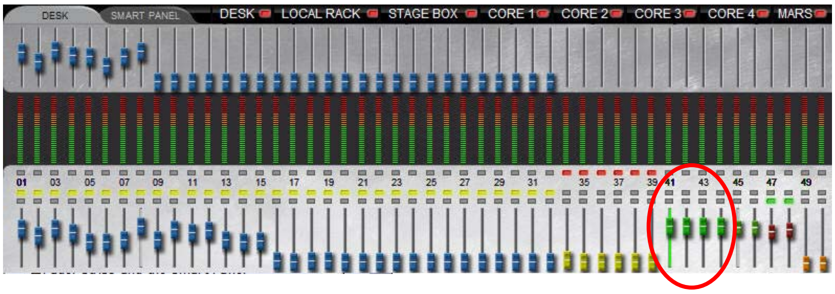
- **SEL** lit steady state = assigned.
- **SEL** unlit = not assigned.

Tip

You can route to multiple outputs in one operation using the multiple assign method described on Page 78.

5. Now move any of the Aux faders – you are controlling the **main level** of the Aux output (Aux master level).

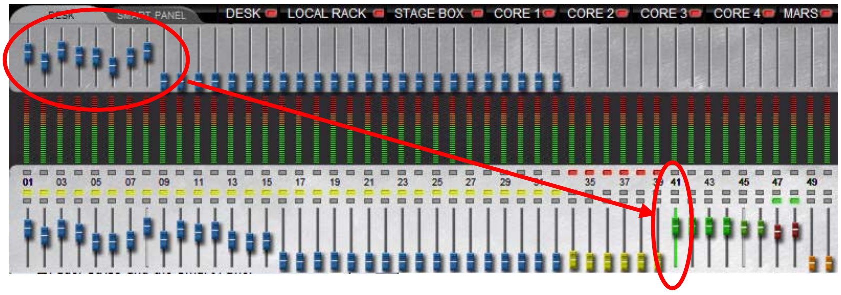
You can confirm this by looking at the Main Mix display



6. Move some of your input faders – in our example, Faders 1 to 8.

Note

Rather than controlling the main channel level, these faders are adjusting the Aux send levels to the selected Aux. You can confirm this by looking at the upper row of faders on the Main Mix display:



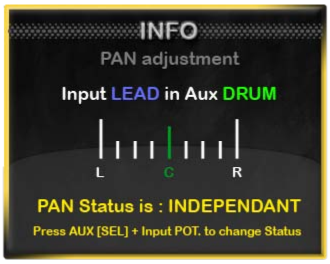
7. Now press **SEL** on a different Aux fader.

The input faders jump. This is because they are now controlling the Aux send levels to a different Aux output.

Tip

So to mix Monitors, simply press the **SEL** button on each Aux and reach out for your input faders to set the levels sending to each wedge.

Note that Aux sends can be pre-fader, post-fader or independent of channel panning. If panning is independent and you have a stereo Aux selected, then turning the Pan control on an input channel sets the pan position for the aux send. See Page 164 for more details.


INFO

PAN adjustment

Input LEAD in Aux DRUM

PAN Status is : INDEPENDANT

Press AUX [SEL] + Input POT. to change Status

You can also set a **General Preferences** option so that when an input is routed to an Aux, the Aux send is automatically set to 0dB, see Page 428.

Multiple Assign Short Cut

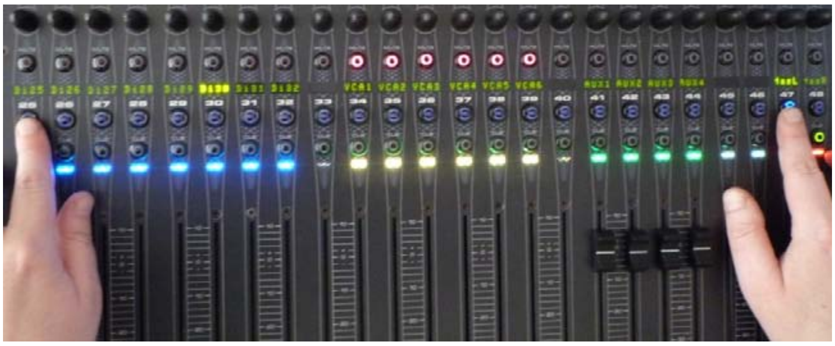
This short cut method can be used to route multiple channels to a mix bus in one operation.

Let’s take an example of Reverse Bus Assign where we want to route 8 input channels (Faders 17 to 24) onto the Master:

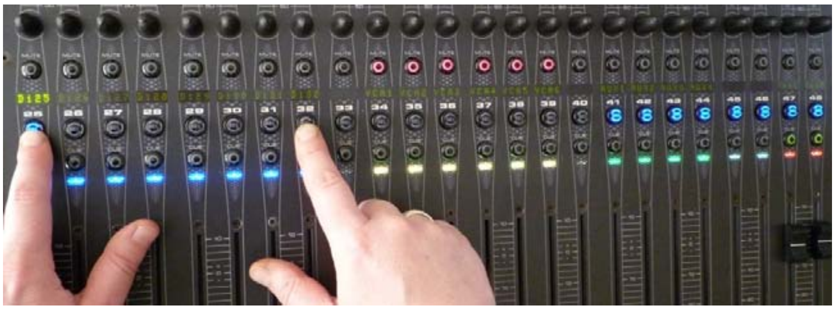
1. Press **SEL** on the Master channel (with a red ID).

*The **SEL** button and Label on the Master should be flashing.*

2. Press and hold the flashing **SEL** button on the Master.
3. Then press and hold **SEL** on the first input fader:

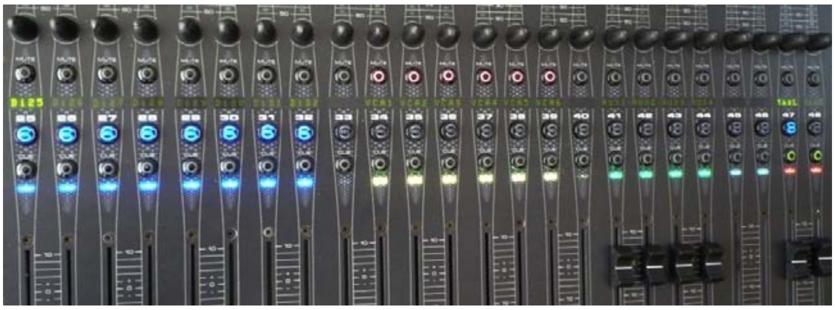


4. Release the Master **SEL** button (but keep holding the input **SEL**), and press **SEL** on the last input fader:



5. Release both **SEL** buttons.

All channels between your first and last selections are assigned to the Master:



Note

Note that you can only make multiple assignments in this way if all the channels you wish to select begin in the same state – either all on (**SEL** lit) or all off (**SEL** unlit).

Don’t Forget the Smart Panel!

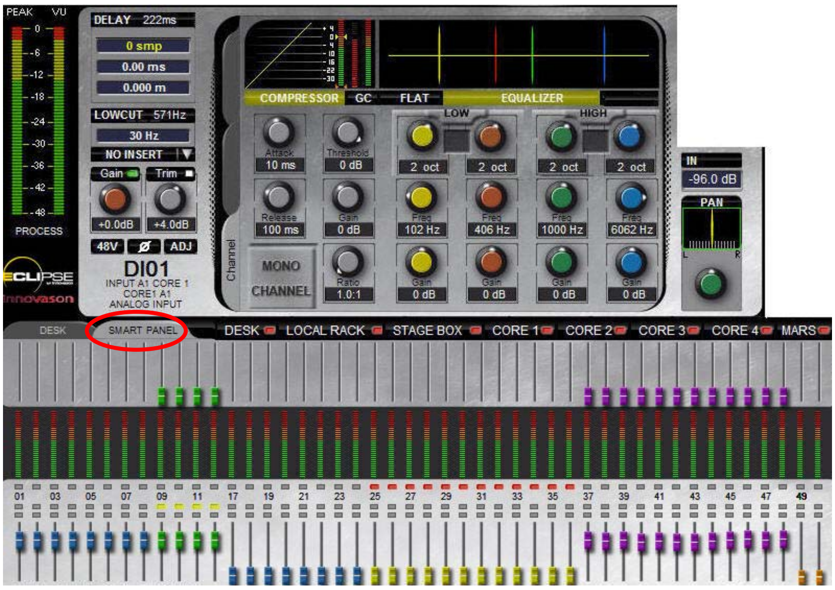
Tip

Remember that routing may be made from channels assigned to the 48 Fader strips *and* the 48 Smart Panel controllers.

To get an overview of the Smart Panel quickly:

1. Click or touch the **SMART PANEL** tab on the Main Mix display.

*The display updates to provide an overview of **SMART PANEL** main levels, send levels, routing assignments, etc.:*



Note that if the “**Flip on faders if tab is active**” option is set within the **General Preferences** window (see Page 428) then the Smart Panel channels are mapped down onto the 48 console faders:

Note

You can also assign a switch on the User Defined panel to this function, see Page 322:

Tip

- Any steady state **SEL** buttons indicate routing from the Smart Panel channels to the selected fader.
- You can move the console faders to quickly set Smart Panel levels (send or main level depending on the channel type).

2. Remember to select the **DESK** tab to return to normal Fader strip and Main Mix display operation.

Routing to Other Mix Busses

The principles of reciprocal bus routing can be applied to any mix bus – Aux, Group, Master or Matrix. However, only Auxes and Matrix outputs have a separate send level. For more details on mix bus sends see Page 163.

Summary

There are many ways of working, and the table on Page 162 describes exactly what each Fader or Smart Panel controller will adjust when different channel types are selected.

Tip

However, if most of the time you are mixing to your Master (PA output) and only occasionally working with Reverse Assign, follow these simple rules:

1. Set up your bus routing using either Forward or Reverse assign; you can set any starting send levels as you go!

Once you are mixing, take care with the **SEL** buttons as follows:

2. For Front of House mixing keep an input channel selected most of the time.

This way your input, Group, Master and Matrix faders are always controlling their main mix and output levels.

3. Switch to Reverse bus assign when you want to quickly set up a mix to an aux – press **SEL** on the Aux and set your mix from the input faders.
4. When you are finished, press **SEL** on any input fader to return to the normal main level input fader mode.

Fader Mode Preferences

If you wish you can change the fader mode from the **General Preferences** window, see Page 428. The options are:

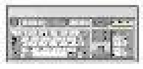
- **Dual** – as described above; when an Aux is selected, input faders act as aux sends. Conversely, when an input is selected, Aux faders control the aux sends.
- **In** - input channel faders *always* control main level and not Aux send level.
- **Aux** - Aux channel faders *always* control Aux master level and never Aux send levels.

Nova Operating Principles

A number of other displays can either replace the Main Mix or appear over it (pop-ups) to perform setup operations such as patching, console layout configuration, control linking, etc.

Depending on the display, there may be three ways to open it: press a front panel button, select an on-screen menu option or press a keyboard shortcut key. Throughout this manual, tables are included to show the different options – for example, to open the **PATCH IN** grid:

- Press **PATCH IN** on the UTILITIES panel.
- Using the trackball select "**GRID -> Patch Input**" from the main menus.
- Press [**F11**] on the console keyboard.

ECLIPSE	**Patch IN** **(UTILITIES)**
	"GRID -> Patch Input"
	**[F11]**

The functions of each menu option are summarised below:

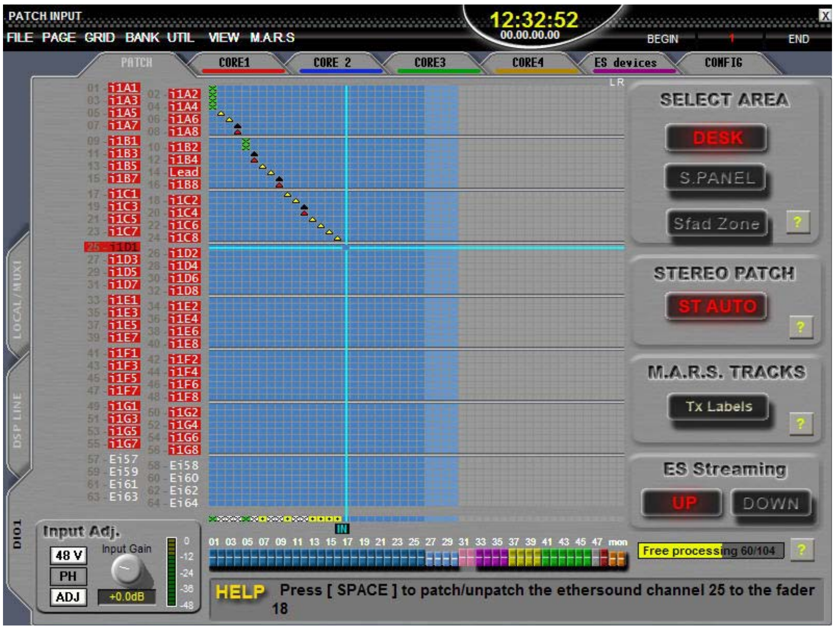
Main Menu	Sub Menu	Function	Page
FILE	Save, Save As, etc.	Manage the Files on the Nova control computer.	342
PAGE	Save, Save As, etc.	Manage the Pages within the current File.	356
GRID	Patch Direct I/O	Patch inputs directly to outputs - for example, a mic input to an AES output – and define the Insert I/O list.	256
GRID	Patch Input	Input patching - for example, a mic to an input channel.	231
GRID	Patch Output	Output patching - for example, an Aux to an in-ear feed.	247
GRID	Link Channel	Link channel parameters – for example, to link EQ sections across multiple channels.	410
GRID	Link I/O	Link input or output card parameters – for example, to link the processing for Auxes patched to UM8 outputs.	421
GRID	Relax Channel	Isolate parameters from a Page load – for example, to prevent Page automation resetting Fader levels.	404
GRID	Pan Screen	Provide an overview of bus assignments, and change post-fader assignments to pre-fader or independent pan.	164
GRID	Fader Start	Programme a fader start.	427
BANK	Save Single, Load Single, etc.	Manage the processing libraries on the Nova control computer.	382
UTIL	General Preferences	System-wide preferences.	428
UTIL	User Defined Assignment	Assign functions to the meters, rotary controls and buttons on the User Defined Panel.	322
UTIL	System Clock Source	Select the system clock source.	48
UTIL	Monitoring	Monitoring preferences.	217
UTIL	Personal Console Builder	Assign different channel types (input channels, Auxes, VCAs, etc.) to the 48 Faders and Smart Panel controllers.	221
UTIL	Over Ram	Overwrite parameters into stored Pages within a File. e.g. to overwrite a new mic gain into all Pages for a show.	399

Main Menu	Sub Menu	Function	Page
UTIL	Copy and Paste	Copy and paste parameters – for example, to copy an EQ or a complete drum mix.	394
UTIL	Lock	Used to password protect certain operations.	432
UTIL	Playlist and Playlist Settings	Manage the Page automation system.	364
UTIL	Help	List all keyboard shortcuts.	434
UTIL	About	Information about the Nova software release and contact details for Innovason.	435
UTIL	Quit	Use this menu option to shut down the Nova software.	436
View	MTC/Xfade	Set options for MIDI timecode and crossfades.	371
View	Cue List	Store and recall cue points when working with a playback device such as M.A.R.S.	456
View	Fast Configuration	Setup default parameters such as all Auxes to 0dB at the beginning of a mix.	318
View	GAIN, PAN and USER Configuration	Set options for the Fader strip pot when switched to GAIN, PAN or USER mode.	123
M.A.R.S.	Preferences	Preferences for M.A.R.S.	477
M.A.R.S.	Virtual Sound Check	Switch to VSC mode to playback a virtual sound check from M.A.R.S.	463
M.A.R.S.	Broadway	Very similar to VSC mode, but you can switch each channel to playback on an individual basis.	463

Returning to the Main Mix Display

While you can continue mixing while viewing displays such as the PATCH grids, it is always a good idea to return to the Main Mix display (so that you have a clear overview of your mix parameters). You can use any of the following methods to cancel an active display:

1. Press **CANCEL** (to the left of the trackball).
2. Turn off the display button – for example, turn off **PATCH IN**.
3. Press [**ESC**] on the console keyboard.
4. Using the trackball, click on the **X** at the top right of the display:



Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

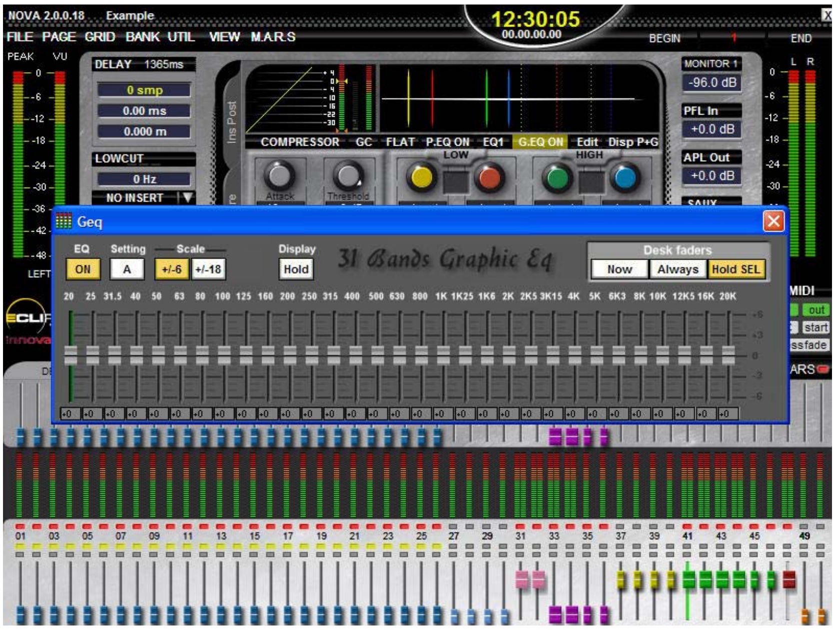
Note that if you click on the **X** at the top right of the Main Mix display, you will shut down the Nova software.

Note

Floating Windows

There are also a number of floating windows which can be overlaid on top of the current display and moved like in MS Windows™.

Floating windows are used for functions such as Effects Editing, Graphic EQ Editing, and the **Play List**:



Depending on the window, you may have access to some or all of the following options:

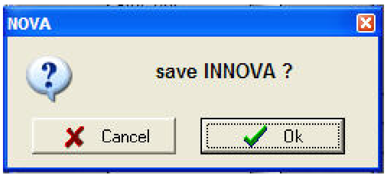
1. Using the trackball you can move the **Geq** window anywhere on the screen.
2. Some windows, such as the **Playlist**, can be resized by selecting and dragging the window borders. If information within a window is hidden, then left/right or up/down scroll bars will automatically appear. Select a scroll bar at the bottom to scroll left/right or up/down.

Any changes you make to window sizes and positions are stored with the current File when it is saved. This means that your mix will come back exactly as it looked when you last saved the File.

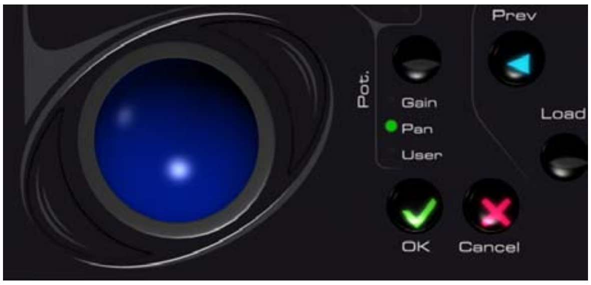
3. To close a floating window, such as the **Geq** Editor, click on the red and white **X** at the top right of the window.

Confirmation Boxes

For some operations you will be asked for confirmation with a pop-up dialogue box:



1. Press the **OK** or **CANCEL** buttons beside the trackball to confirm or cancel the operation:



2. Or, click on the screen buttons.
3. If you are using the console keyboard, you can also press [**ENTER**] to confirm or [**Esc**] to cancel.

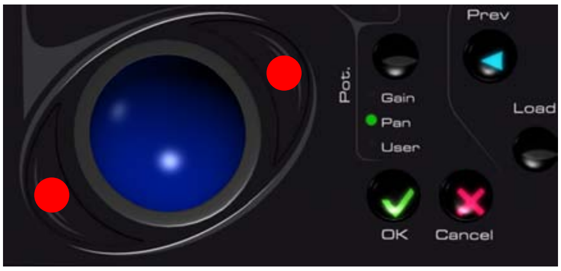
The Trackball

There are two trackballs on the console:

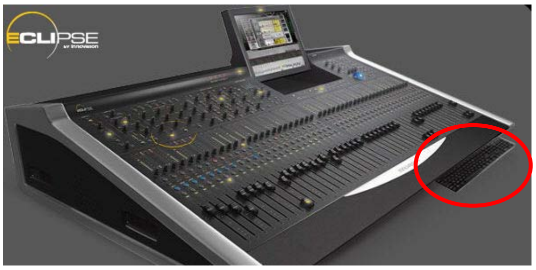
The first is on the surface beside the FILES/AUTO panel.

Note

Note that the left and right-click buttons for this trackball are raised from the surface as marked with the red dots below:



The second is beside the console keyboard in a pull-out drawer at the front of the desk:



Using the Touch-Screen

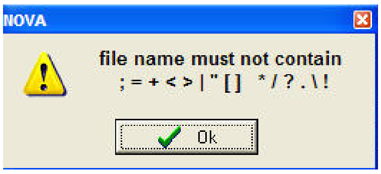
Anything which can be selected from the trackball can also be operated by touching the screen. So, for example, you could turn on the Compressor by touching the on-screen button.

Note

Note that using the touch-screen is best reserved for large buttons!

The Console Keyboard

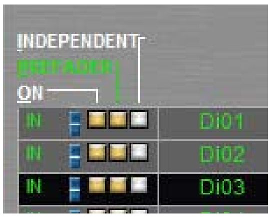
The console keyboard is located in a pull-out drawer at the front of the desk and is used for entering names such as Labels, File names, etc. Names may be limited to a certain number of characters, and cannot contain spaces or invalid characters:


NOVA

file name must not contain
; = + < > | " [ ] * / ? . \ !

The keyboard also provides access to several short-cuts. For example, to name a Label, you would press [**F3**] on the console keyboard. You can find a full list of keyboard short-cuts by pressing [**F1**], or selecting the "**UTIL -> Help**" menu.

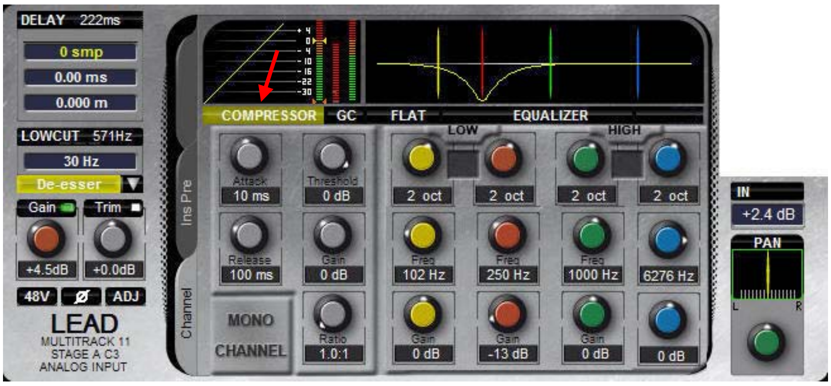
Often you will use the keyboard to select a function by pressing the letter underlined on-screen; in the **PAN** display, shown opposite, pressing [**O**] selects On, [**P**] selects Prefader, and [**I**] selects Independent.



Controlling Mix Parameters from the Screen

Most of the console's main mixing functions are best controlled from the front panel – for example, to adjust EQ you would select the channel and reach out for the EQ section. However, to support offline operation, many functions can also be controlled from the trackball:

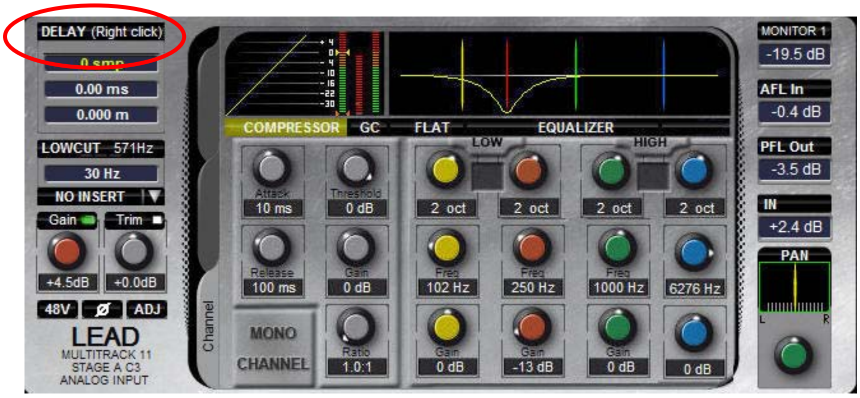
1. To control switched functions, such as Compressor On/Off, position the pointer over the button and left-click:



2. To adjust on-screen rotary controls such as Compressor **Threshold**, position the pointer over the control and left-click to decrement or right-click to increment the value.

Note

Normally, the right-click button has no function. However, occasionally it is required to access a particular function: for example, to assign a Delay to a channel. In most instances, the screen text will guide you:



For more details on using a mouse and keyboard to prepare an offline configuration, please refer to Chapter 9.

Chapter 4: Getting Started (The Standard Template)

Introduction

Having covered the operating principles of the **Eclipse**, let’s look at how to get started on the console. To do this we are going to load and work with the standard template File (**Templ1**) which is pre-installed on every console.

We are assuming that you have already installed and connected your console as described in Chapter 2.

For more details on a particular console operation, then please see Chapter 5. To modify or build your own configuration, please see Chapter 6.

Loading a File

Console settings are stored and recalled from “Files” where each File may contain one or more “Pages”. Think of each File as your show, and each Page as a snapshot of settings to be loaded during that show.

To reduce your setup time each console is shipped with a pre-installed File named **Templ1** which contains a single Page snapshot named **INNOVA**.

The template defines a typical user configuration where input channels, VCAs, Auxes, a stereo Master and Matrix busses are all pre-assigned to the console surface. Default input, output and internal effects patching are also implemented so all you need to do is connect your microphones, PA or monitors to the correct I/O and you will have audio.

For specific details on the connections defined by **Templ1**, please see Appendix A.

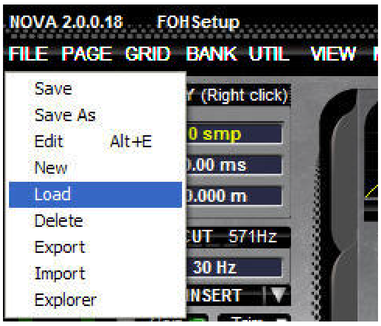
Warning

Warning

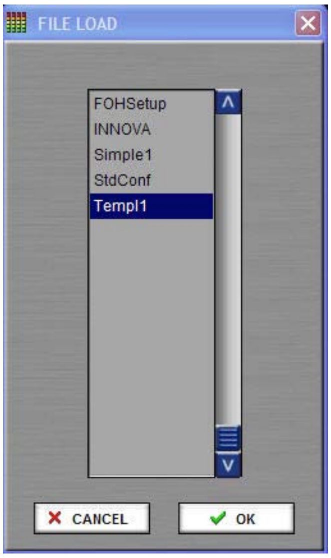
When you load an unknown file you may load settings which cause audio to pass through the console. Therefore, make sure any amplifiers, headphones, etc. are turned off or at a safe operating level before you load.

To load the file:

1. Using the trackball select “**FILE** -> **Load**” from the main menus.

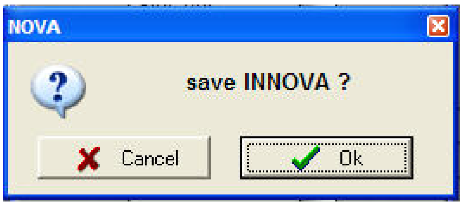


*The **FILE LOAD** window appears on the Nova screen:*



2. Select the File you wish to load – **Templ1**.
3. Confirm by pressing **OK**.

The following dialogue box appears:



save INNOVA ?

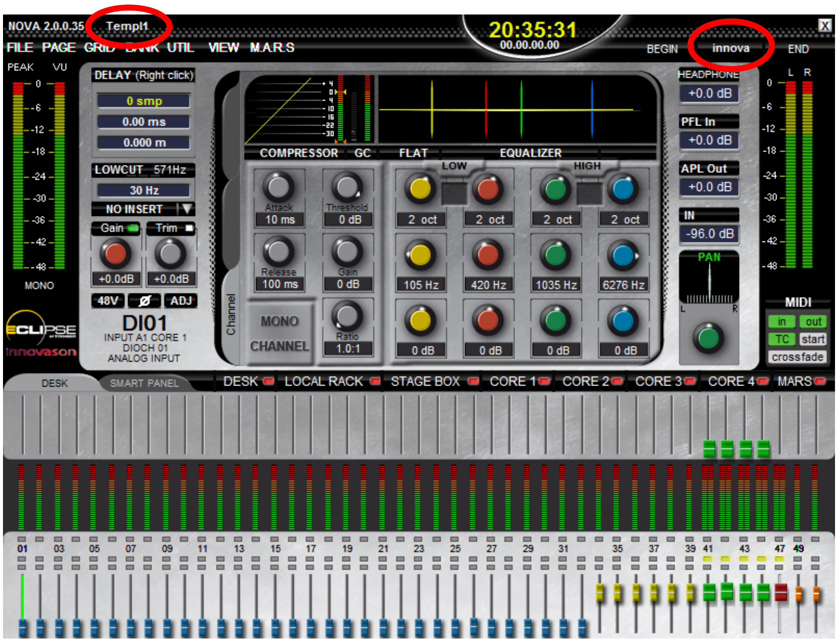
This is asking if you wish to save the current PAGE (in our example, **INNOVA**) before loading the File.

When you load a File, any Pages in memory are replaced. Therefore, you will be asked if you wish to save each of these Pages before the load takes place.

4. If you have nothing new to save, press **CANCEL**.

The Nova software now loads the **Templ** File from hard disk to the console memory. The **Temp1** File contains a single Page (**INNOVA**). When the load is complete, the console resets to the settings stored in this Page.

Note that the active File and current Page names are shown at the top of the Main Mix display:

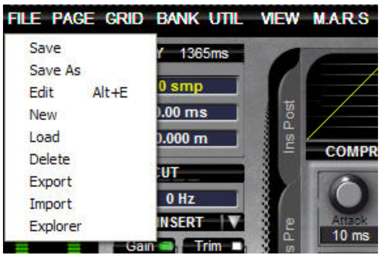


Creating a New File (Save As)

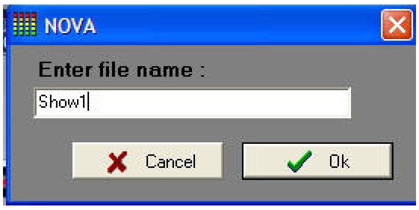
Before you start working on the console it is a good idea to save a copy of the **Templ1** File under your own name. This way you won't overwrite the standard template with your own settings!

The best method is to use **Save As**:

1. Using the trackball select "**FILE** -> **Save As**" from the main menus.



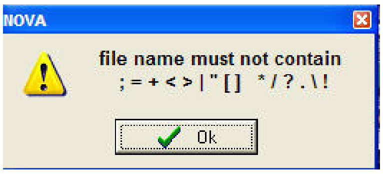
A window requesting a File name appears on the Nova screen:



Enter file name : Show1

2. Type in a name on the console keyboard – e.g. **Show1**.

Note that the file name is limited to 8 characters, and cannot contain spaces or invalid characters:

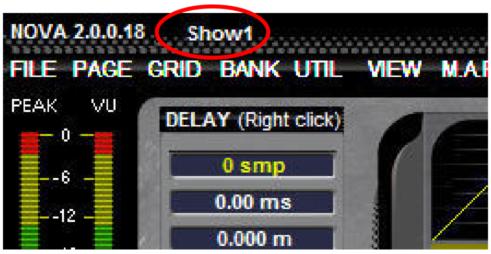


file name must not contain
; = + < > | " [] * / ? . \ !

3. Confirm by pressing **OK**.

Nova now saves all Pages within the desk memory into a new File on its hard disk called **Show1**. You will see the progress of the save.

When the Save is complete, the new File name appears at the top of the Main Mix display:



Interrogating the Fader Strips

You can quickly interrogate which Fader strips are inputs, VCAs, Auxes, etc. by looking at the ID colours and default Labels loaded by the template:

- Blue IDs = input channels (these are standard inputs, not Smart Faders)
- Yellow IDs = VCAs
- Green IDs = Auxes
- Red IDs = Master Left and Master Right

Input channels 1 to 32 are patched from the first 32 mic/line inputs to the DioCore.

The four Auxes assigned to Fader Strips 41 to 44 are stereo and are patched back to the UM-8PO card in DioCore. This makes them ideal for stage monitor feeds.

The stereo Master is patched to local UM-8 (A1 & A2) outputs at the rear of the console. Connect your PA speakers here.

By interrogating the bus routing, as described on Page 74, you will see that all inputs are routed to the stereo Master and to all four stereo Auxes. In addition, the sends to each Aux have been prepared as pre-fader; the send levels are currently closed.

Tip

If you want to modify the starting parameters for a range of channel types – for example, switch EQ on across all Auxes – then use the **Fast Configuration** window described on Page 318.

Please see Appendix A (Page 508) for full details on how to connect your audio devices.

Interrogating the Smart Panel

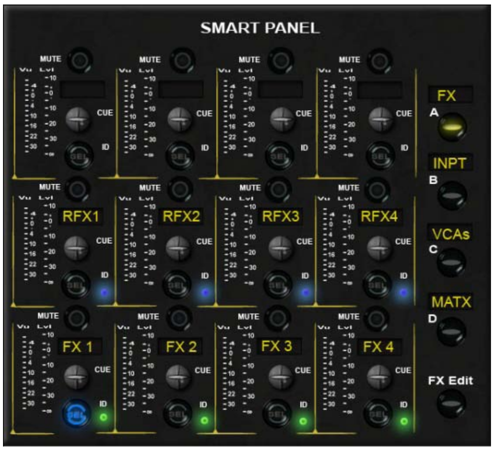
Press the **A**, **B**, **C** and **D** buttons to view the four layers of the Smart Panel in a similar manner:

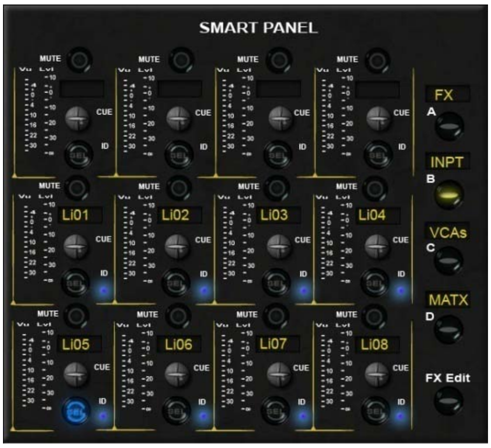
⏩ Layer A (FX)

8 controls have been configured to provide 4 mono FX sends (Auxes) and 4 stereo FX returns to/from 4 internal stereo Effects bays (FM-8VB card). They are routed from all input channels, and prepared as post-fader sends.

⏩ Layer B (INPT)

8 controls are used in this layer as input channels patched from the 8 mic/line inputs at the rear of the console (SI-8D3 card).



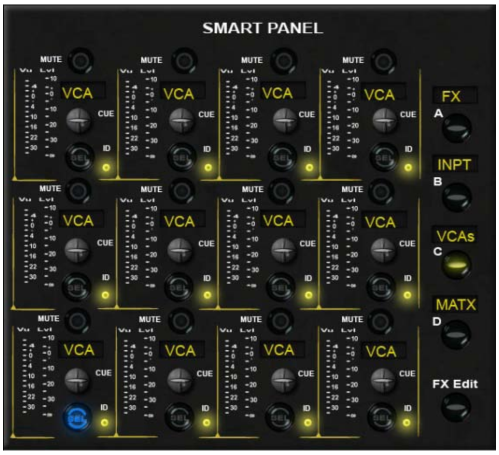


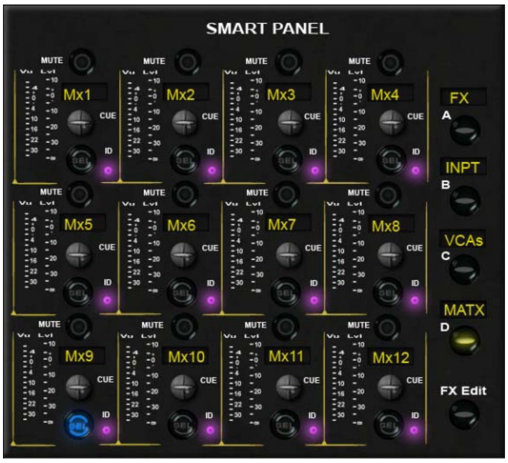
⏩ Layer C (VCAs)

This layer provides 12 VCA channels.

⏩ Layer D (MATX)

This layer provides 12 Matrix outputs patched to local UM-8 outputs at the rear of the console.





Signal In to Out

Normally on Eclipse, there are three operations required to get signal through the console:

- **PATCH IN** – patch your audio sources to input channels
- **ROUTE** – assign your input channels to your Master and other outputs (Auxes, Groups, etc.)
- **PATCH OUT** – patch your Master and other outputs to their physical destinations.

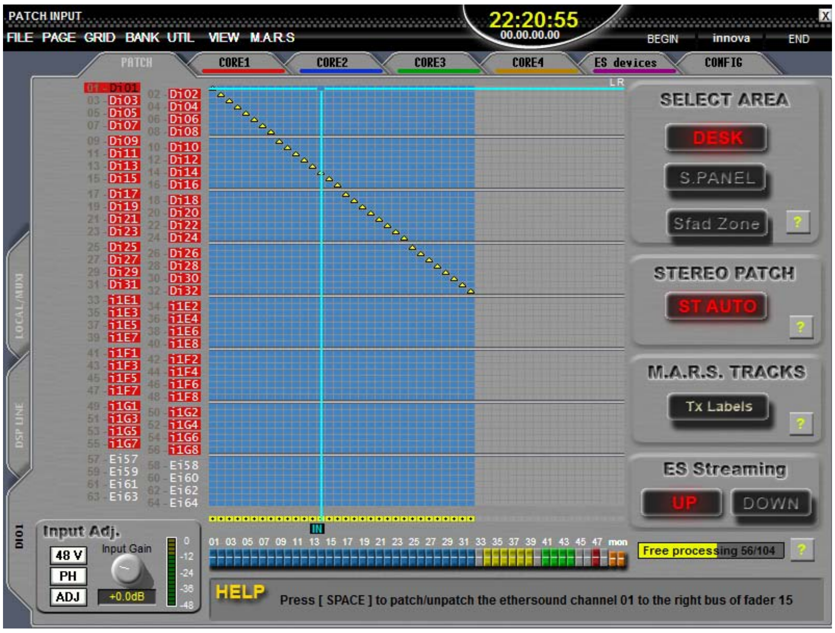
By loading the **Templ1** File you already have a console with inputs and outputs patched, and with routing assignments made. This means that you can literally open some input faders, open the stereo Master and start mixing!

If you want to do this right now, skip to Page 100. If you'd like to view or modify any of the default patching or routing, read on.

Default Patching

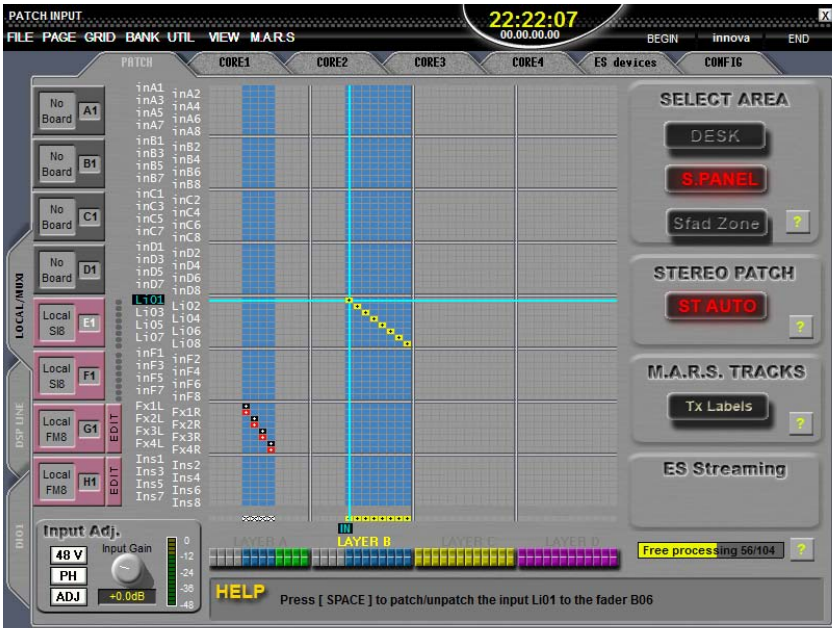
Input Channels

Faders 1 to 32 are patched from the first 32 mic/line inputs to the DioCore:



HELP Press [SPACE] to patch/unpatch the ethersound channel 01 to the right bus of fader 15

Smart Panel controls on Layer B are patched from the 8 mic/line inputs at the rear of the console:



HELP Press [SPACE] to patch/unpatch the input Li01 to the fader B06

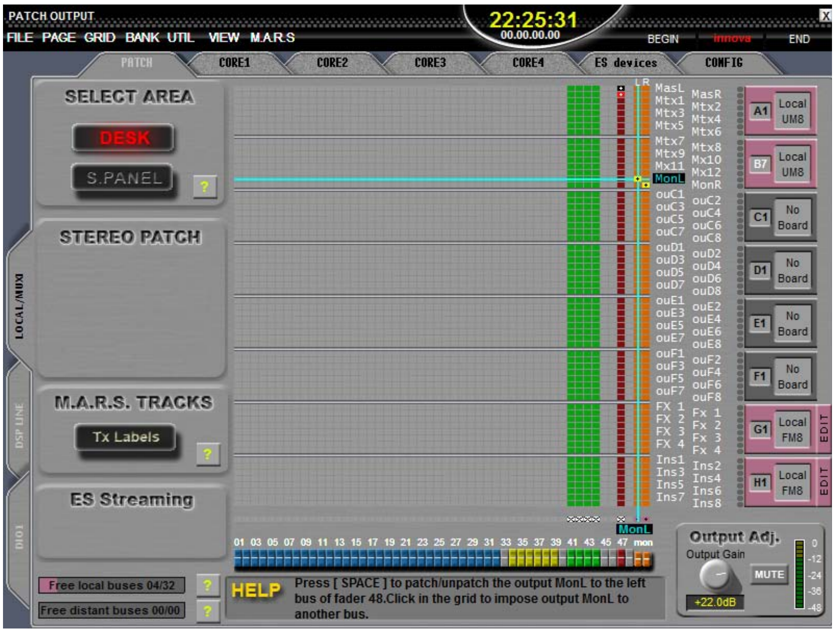
You can view or modify this patching from the **PATCH IN** grid as described on Page 231.

Outputs

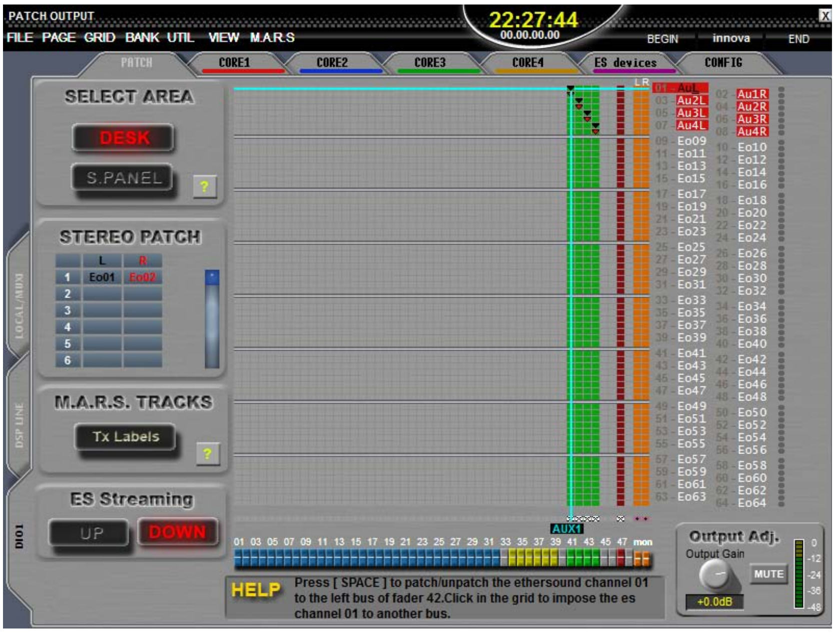
The stereo Master, Matrix outputs 1-12 and stereo Monitor bus are patched to the 16 UM-8PO outputs at the rear of the console. All these outputs feature signal processing provided by the UM-8 card: Compressor, Gate, Delay, Parametric EQ, Graphic EQ and output Gain.

The four stereo Auxes (Fader strips 41 to 44) are patched to the 8 UM-8PO outputs in the DioCore. Therefore they also feature Output processing.

You can view or modify this patching from the **PATCH OUT** grid, as described on Page 247:



HELP Press [SPACE] to patch/unpatch the output MonL to the left bus of fader 48.Click in the grid to impose output MonL to another bus.

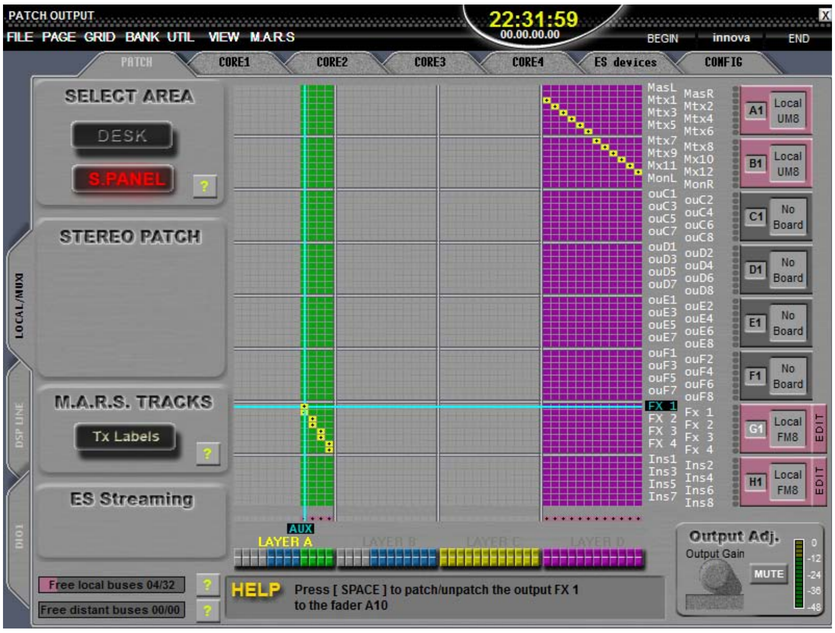


HELP Press [SPACE] to patch/unpatch the ethersound channel 01 to the left bus of fader 42.Click in the grid to impose the es channel 01 to another bus.

Effects Patching

The first FM-8VB card is configured for four stereo effects bays, and is automatically patched to/from the Smart Panel Layer A FX send and return channels.

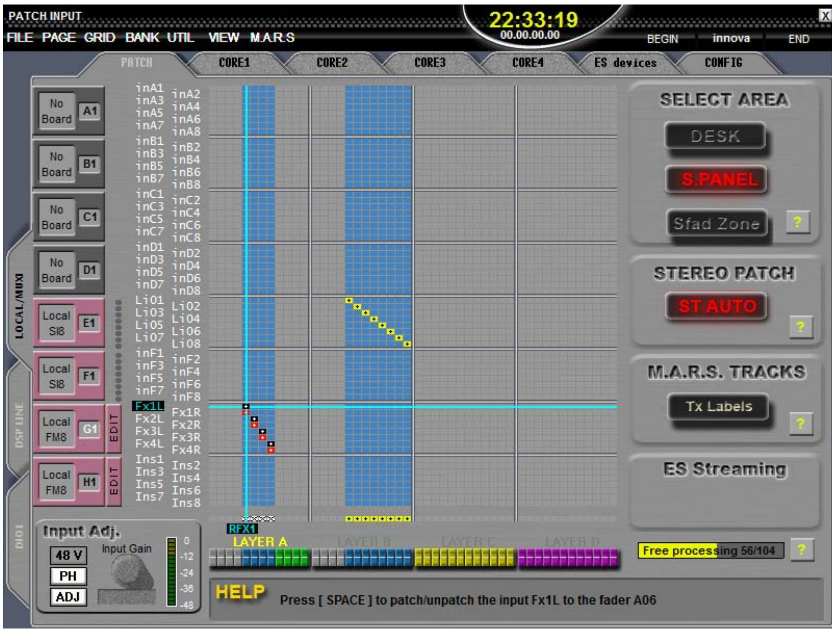
You can view or modify the FX Send patching from the **PATCH OUT** grid and FX Return patching from the **PATCH IN**:



Free local buses 04/32

Free distant buses 00/00

Press [SPACE] to patch/unpatch the output FX 1 to the fader A10



Free processing 56/104

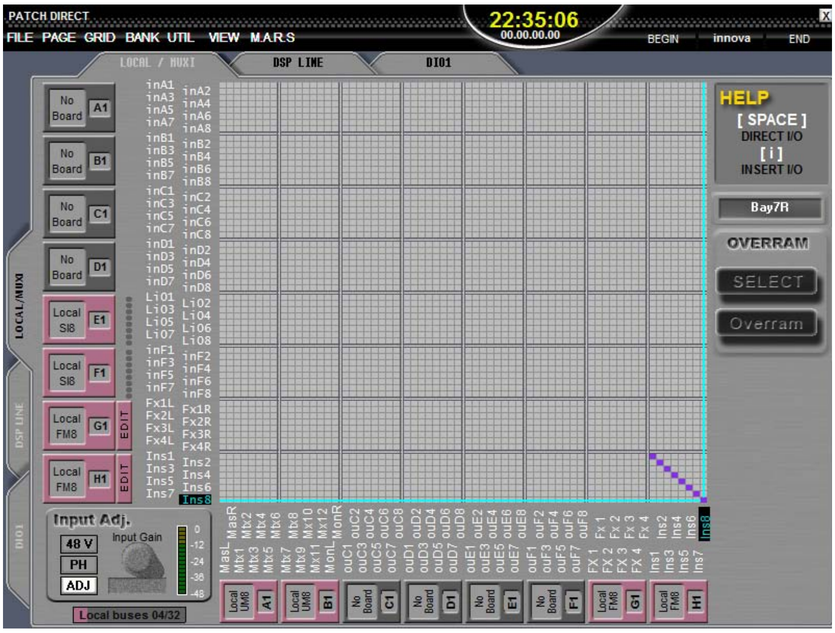
Press [SPACE] to patch/unpatch the input Fx1L to the fader A06

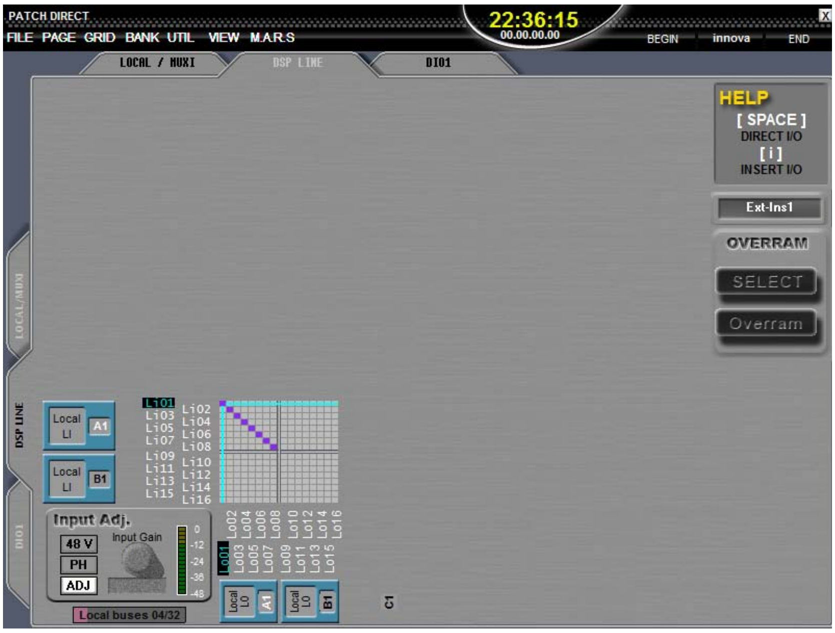
Insert Patching

The second FM-8VB card is configured for 6 mono inserted effects bays and one stereo.

And the first 8 Line Level ins and outs (on the DSP card at the rear of the console) are configured for eight mono external insert points.

You can view or modify this patching from the **PATCH DIRECT** grid, as described on Page 256:





Default Bus Routing

You can interrogate or modify your bus routing using either Forward or Reverse Bus assign, see Page 74.

You will see that all input channels are routed to:

- The stereo Master
- All four stereo Auxes (Faders 41 to 44); these sends are prepared as pre-fader sends.
- All four mono FX sends (Smart Panel Layer A); these sends are prepared as post-fader sends.

There are no routing assignments to any VCAs or Matrix outputs.

If you want to know more about Mix Busses, see Page 159.

For details on Aux (and Matrix) sends, see Page 163.

For the moment we will assume that you are working with the basic routing loaded by the **Templ1**.

Your First Mix

By loading the **Templ1** File, you have loaded a console configuration, input and output patching, and some default bus routing. This means you can get mixing immediately as follows:

1. Press **SEL** on any input channel (with a blue ID).

The SEL button and Label will flash. All input channel faders will now control the main channel level (not the Aux send).

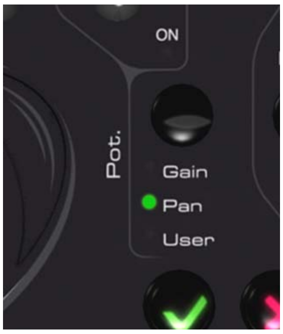
2. Open up some input faders.
3. Open up the Master fader (red ID).

You will now have audio on the stereo Master outputs patched to the UM8-PO card at the rear of the console!

Note

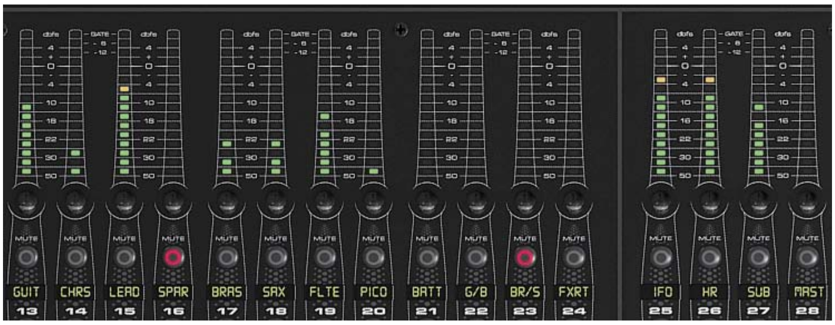
Note that it is important that you select an input channel while setting up your initial mix. This ensures that your faders are controlling main channel levels and not Aux send levels. See Page 74 for details.

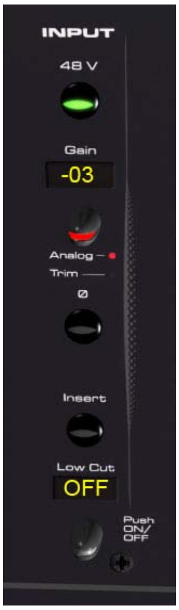
Microphone Preamp Settings



To adjust mic preamp gains for several input faders:

1. Press the **Pot.** Button beside the trackball until the **Gain** LED lights.
2. Turn the rotary controls to remotely adjust analogue preamp gain for each input:





An INFO pop-up appears on the Main Mix display, and gain is displayed in the fader Label (in dB) when you move a control.

Note that the rotary control may be configured to adjust either analogue Gain or digital Trim from the Pot configuration window, see Page 123 for details.

If you need to turn on phantom power:

3. Press **SEL** on the input channel.

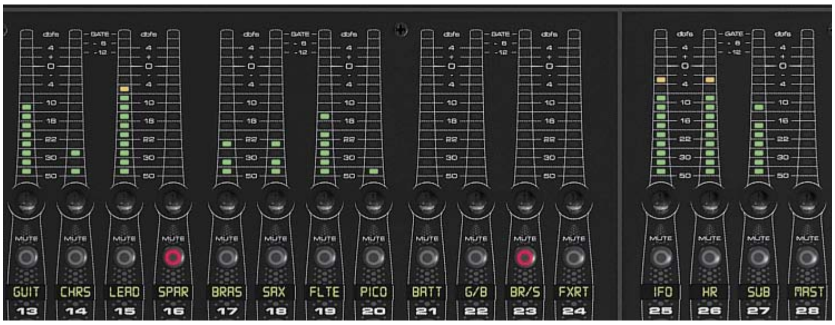
This assigns the channel to the INPUT, DYNAMIC, DELAY and PARAM EQ panels.

4. Then press the **48V** button on the INPUT panel.

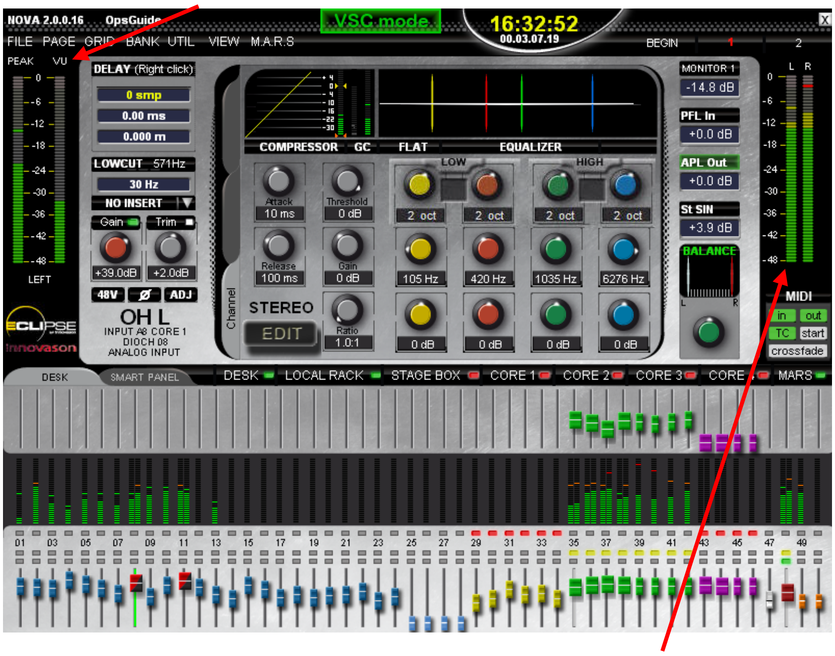
You can also adjust analogue gain, digital trim or phase.

Metering

As soon as audio is present you will see levels on the input and Master fader VU meters:

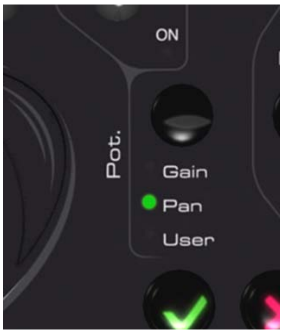


You will also see **PEAK** and **VU** metering for the selected input channel (**SEL** flashing) on the left of the Main Mix display:



And **LEFT** and **RIGHT** output metering for the stereo Master on the right of the display.

Panning



1. Press the **Pot.** button beside the trackball until the **Pan** LED lights.

This assigns left/right Pan to the Fader strip rotary controls.

2. Turn the rotary controls to set the pan position.

An INFO pop-up appears confirming the setting.

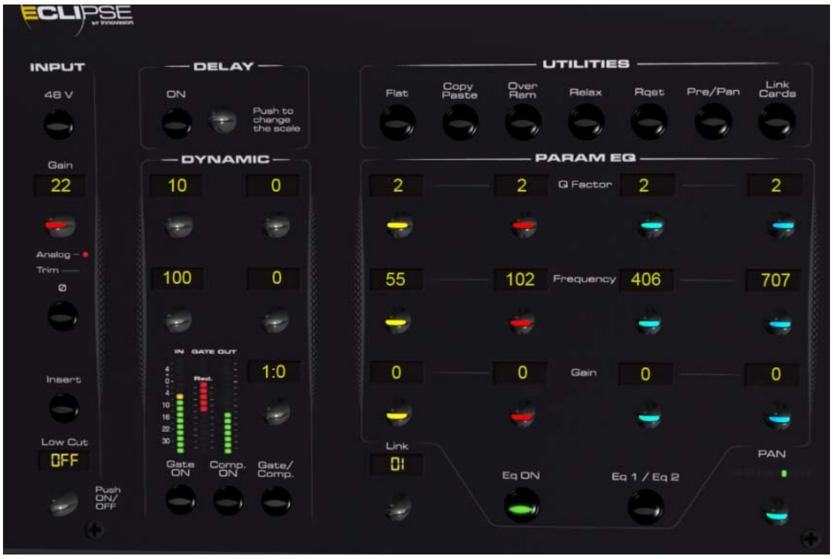
Dependent panning affects all stereo bus sends – in our template, this is the stereo Master and stereo Aux sends. Note that panning to Auxes may be independent for each Aux output. See Page 126 for details.

Applying Processing to an Input

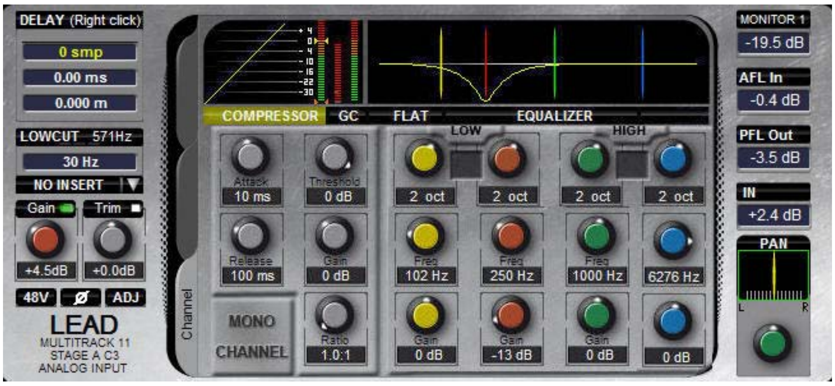
1. Press **SEL** on the input channel you wish to process.

*The **SEL** button and Label flash.*

2. You can now use any of the front panel controls to adjust EQ, Compressor, Gate, etc.:



Controls are laid out to match the controls on the Main Mix display:



For a full explanation of EQ, Dynamics and other processing sections, please see Page 131.

Processing the Stereo Master

The stereo Master (Fader 47) is patched to a UM8-PO card. This means that it has output processing (Compressor, Gate, 8-band Parametric EQ, 31-band Graphic EQ and Delay) which is applied on the output card.

By default, the processing on a stereo channel is linked, so any settings will apply to both left and right sides of the Master.

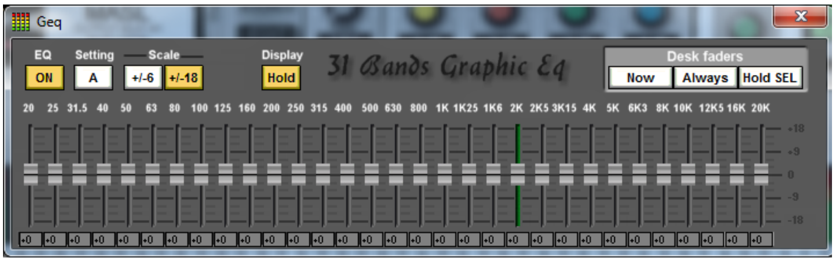
Note

Note that you can adjust left and right independently by deploying the component channels to the Smart Panel, see Page 189 for details.

To apply processing to the stereo Master:

1. Press **SEL** on the Master fader (red ID).

*The **SEL** button and Label flash and the Main Mix display updates to show the current settings:*


Geq
EQ
ON
Setting
A
Scale
+/-6
+/-18
Display
Hold
31 Bands Graphic Eq
Desk faders
Now
Always
Hold SEL
20 25 31.5 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1K25 1K6 2K 2K5 3K15 4K 5K 6K3 8K 10K 12K5 16K 20K
+18
+9
0
-9
-18

The **Templ1** file sets the **Geq** window so that it automatically appears when you select the Master (Display **Hold** is on). Therefore, the selected channel is covered by the **Geq** window.

2. To adjust the Graphic EQ, either click and drag the on-screen faders.
3. Or activate the Geq editor of the user defined section. Unactivate it when the Graphiq EQ is set.

While Geq editor is activated, the 31-bands of Graphic EQ are temporarily assigned down onto the first 31 faders; Fader 32 allows you to change the scale of the Graphic:

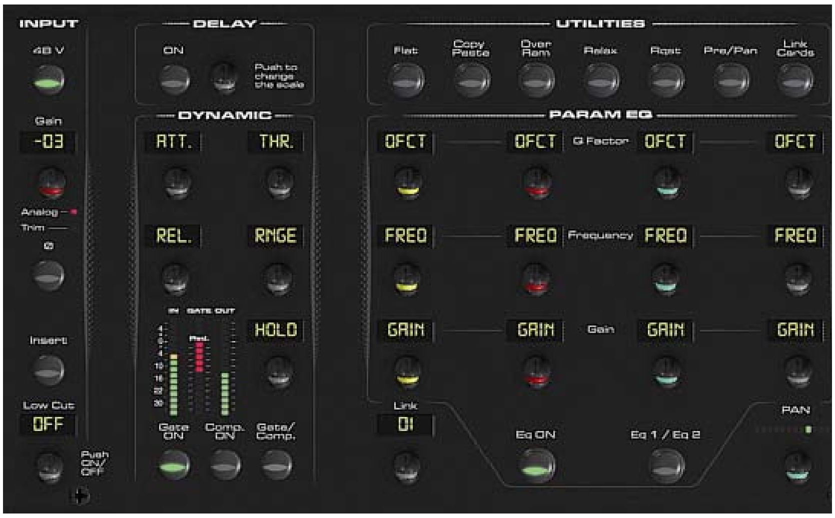
4. When you are finished, switch OFF the Geq Editor.

Note

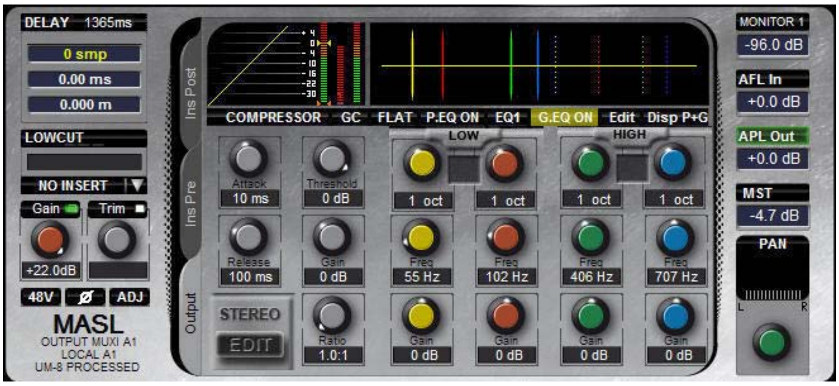
Note that the **Geq** Editor can be activated and you can select other buses (AUX) to adjust or compare the settings.

You can find more details on the Graphic EQ window on Page 180.

5. At any time you can adjust the other processing sections from the front panel controls:



6. To view the parameters on the Main Mix display, close the **Geq** window:



For more information on output processing, see Page 173.

Setting Up an Aux Mix

The four Auxes configured on Faders 41 to 44 are stereo and prepared as pre-fader sends from all input channels. This makes them ideal for creating mixes back to the stage (for monitors).

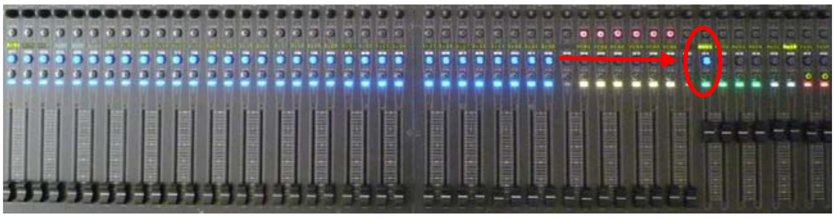
To setup the Aux mixes:

1. Press **SEL** on an Aux fader (with a green ID).

*The **SEL** button and Label flash and the console's input channel faders move. This is because the faders are now adjusting send levels to the selected Aux.*

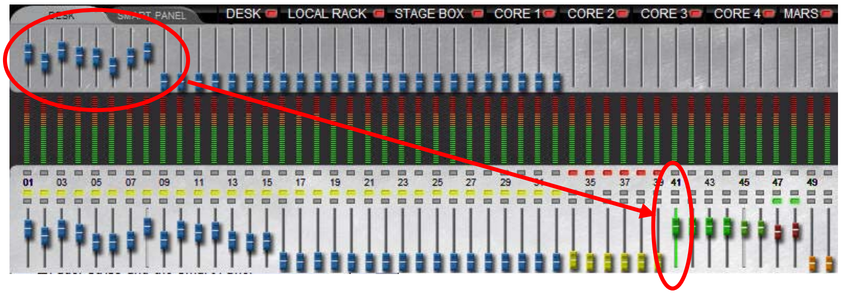
2. Look across the console at the status of the **SEL** buttons on your input channels:

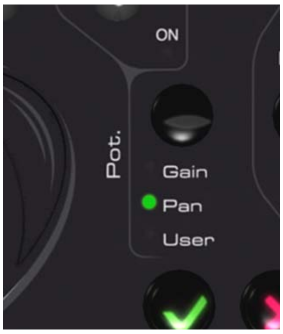
The steady state **SEL** buttons indicate bus assignments to the selected Aux:



3. Move the input faders – in our example, Faders 1 to 8.

The faders adjust the send levels to the selected Aux. You can confirm this by looking at the upper row of faders on the Main Mix display:





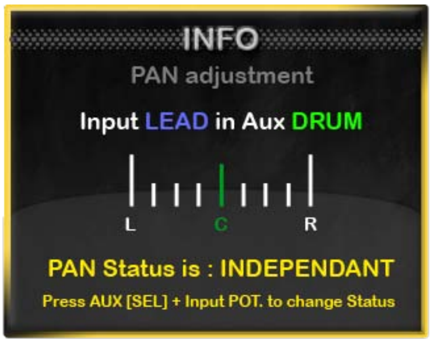
Note that by default, the panning to stereo Aux follows the main channel pan position (panning is dependent). However, you can change each Aux send to independent panning as follows:

4. Press the **Pot.** button beside the trackball until the **Pan** LED lights.

This assigns left/right Pan to the Fader strip rotary controls.

5. On the input channel, press down on the rotary control to switch the Aux send to **independent panning**.

An INFO pop-up appears confirming the mode and current setting:



INFO
PAN adjustment
Input LEAD in Aux DRUM

PAN Status is : INDEPENDANT
Press AUX [SEL] + Input POT. to change Status

6. Turn the rotary control to adjust the pan position.

You are now adjusting panning to the selected Aux only.

Note

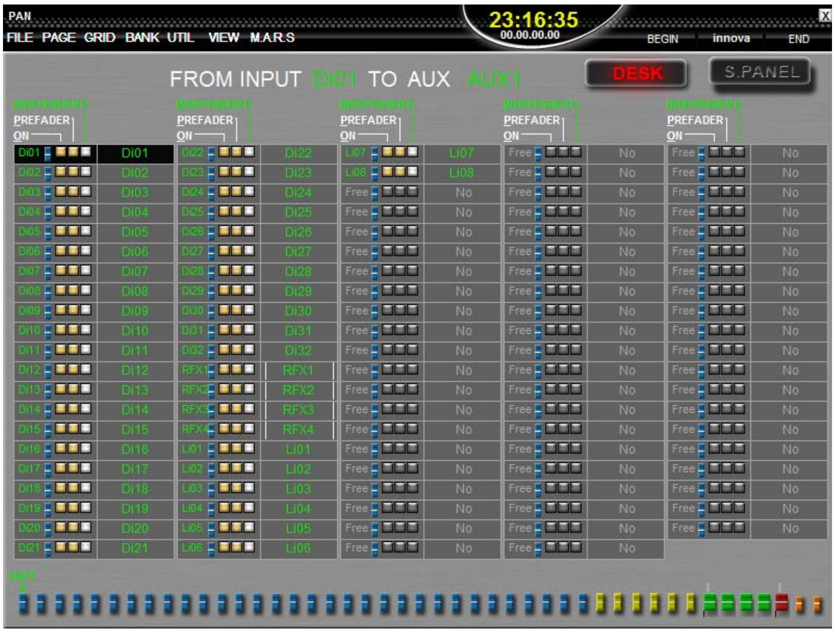
Note that you can only switch to Independent pan if this option is enabled in the Pan Configuration window, see Page 123.

7. Now press **SEL** on a different Aux fader.

The input faders jump to indicate the send levels to the selected Aux.

8. Repeat steps 3 to 6 to setup the next Aux send mix.
9. You can change the Aux assignments at any time by pressing and holding the flashing AUX **SEL** button while you press the **SEL** buttons on your input faders.

Note that the sends to **AUX 1** to **AUX 4** have been configured to be pre-fader sends by the **Templ1** file. You can see this by opening the **PAN** display while an Aux is selected:



FROM INPUT Di01 TO AUX AUX1

PREFADER ON		PREFADER ON		PREFADER ON		PREFADER ON		PREFADER ON	
Di01	Di01	Di22	Di22	Li07	Li07	Free	No	Free	No
Di02	Di02	Di23	Di23	Li08	Li08	Free	No	Free	No
Di03	Di03	Di24	Di24	Free	No	Free	No	Free	No
Di04	Di04	Di25	Di25	Free	No	Free	No	Free	No
Di05	Di05	Di26	Di26	Free	No	Free	No	Free	No
Di06	Di06	Di27	Di27	Free	No	Free	No	Free	No
Di07	Di07	Di28	Di28	Free	No	Free	No	Free	No
Di08	Di08	Di29	Di29	Free	No	Free	No	Free	No
Di09	Di09	Di30	Di30	Free	No	Free	No	Free	No
Di10	Di10	Di31	Di31	Free	No	Free	No	Free	No
Di11	Di11	Di32	Di32	Free	No	Free	No	Free	No
Di12	Di12	RFX1	RFX1	Free	No	Free	No	Free	No
Di13	Di13	RFX2	RFX2	Free	No	Free	No	Free	No
Di14	Di14	RFX3	RFX3	Free	No	Free	No	Free	No
Di15	Di15	RFX4	RFX4	Free	No	Free	No	Free	No
Di16	Di16	Li01	Li01	Free	No	Free	No	Free	No
Di17	Di17	Li02	Li02	Free	No	Free	No	Free	No
Di18	Di18	Li03	Li03	Free	No	Free	No	Free	No
Di19	Di19	Li04	Li04	Free	No	Free	No	Free	No
Di20	Di20	Li05	Li05	Free	No	Free	No	Free	No
Di21	Di21	Li06	Li06	Free	No	Free	No		

ECLIPSE	**Pre/Pan** **(UTILITIES)**
	“GRID -> Pan Screen”
	n/a

The display shows that input channels 1 to 32 are **On** and **Pre-fader**. You can find more details on this display on Page 164.

10. When you have finished setting up the Aux send mixes, press **SEL** on an input fader to return your input channels to their normal operation (main channel level).

Note that the default fader mode (Dual) can be altered from the **General Preferences** window. You can also set an option so that when an input is routed to an Aux, the Aux send is automatically set to 0dB, see Page 428.

Controlling the Stereo Aux Masters

The four Aux faders (**AUX1** to **AUX4**) are stereo channels, so settings can be applied to both left and right by selecting the Aux and adjusting the EQ, DYNAMICS, etc. panels.

Note

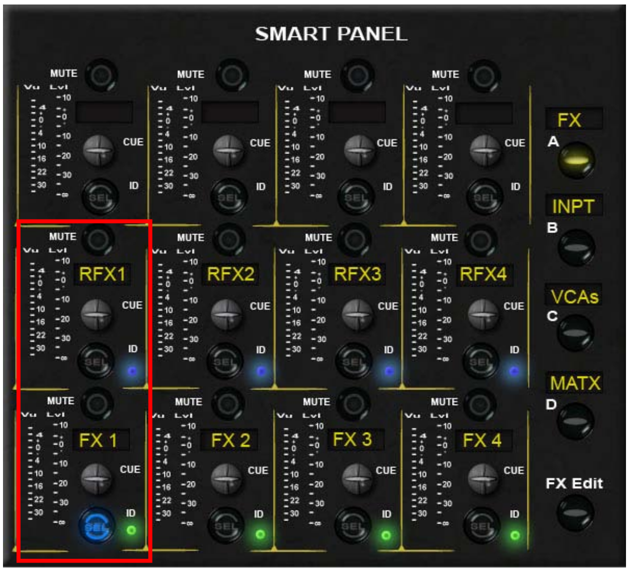
Note that processing is applied to the UM8 output card (as for your stereo Master).

You can adjust the left and right sides of the Aux output by deploying the component channels to the Smart Panel, see Page 189 for details.

Internal Effects

The **Templ1** file configures four stereo effects bays from the first FM-8VB card. These are patched from Aux sends and to FX return channels on the Smart Panel:

1. Press the layer **A** (**FX**) button on the Smart Panel to access the controls:



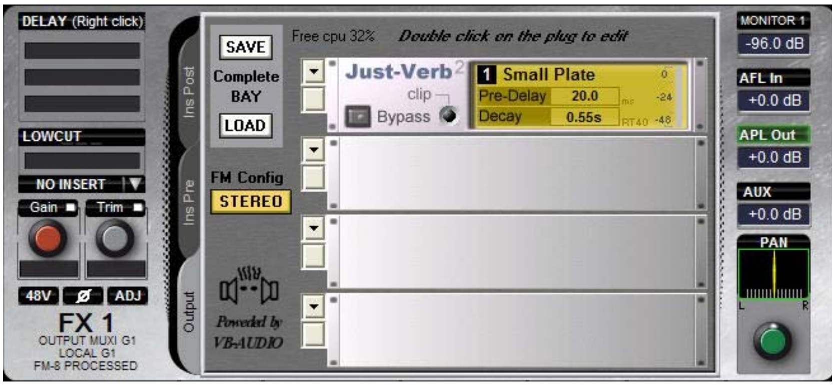
For each effects bay you will find:

- FX send (e.g. **FX 1**) – this a mono Aux (green ID).
- Stereo FX Return (e.g. **RFX1**) – these is a stereo input channel (blue IDs) which have been routed to the stereo Master.

2. Press **SEL** on one of the FX sends – e.g. **FX1**:

*The **SEL** button and Label flash and the console's input channel faders move. This is because the faders are now adjusting send levels to the selected Aux.*

The Main Mix display also updates and shows that the output from this Aux send is patched to a stereo effects bay:



You can see that the bay has been configured with a **Just-Verb** plug-in.

3. Press **SEL** on the other FX sends.

The Main Mix display shows that each one is pre-configured:

- **FX1** – Just-Verb (Small Plate setting)
- **FX2** - Just-Verb (Big Hall setting)
- **FX3** - Chorus
- **FX4** - MultiTap Delay

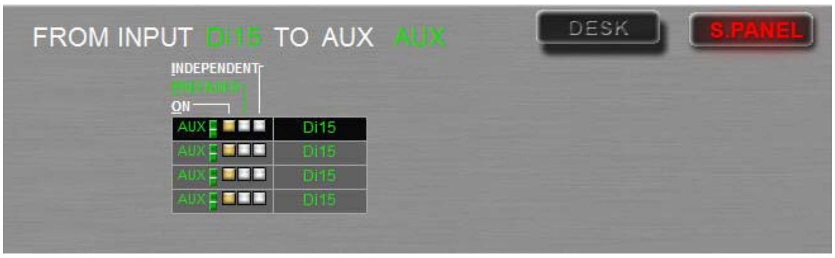
Of course you can change these plug-ins, or add other plug-ins to the modules in each rack. For now, we'll assume that you want to use the **Just-Verb** which is patched from **FX1**.

4. Press **SEL** on any input fader you wish to send to the effect.

Notice that the **SEL** buttons on the Smart Panel **FX1** to **FX4** channels are selected (steady state). This means that the Aux sends are routed (on).

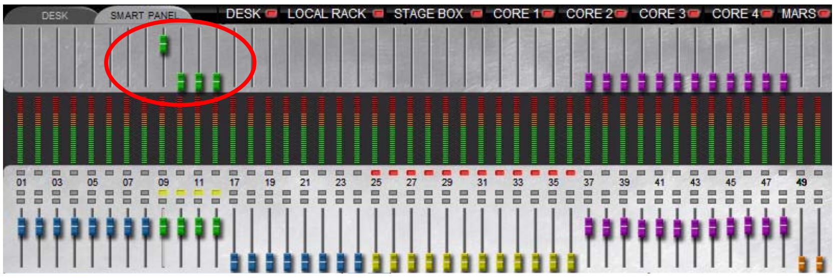
If you open the **PAN** display, you will also see that the sends have been prepared as post-fader:

	Pre/Pan **(UTILITIES)**
	"GRID -> Pan Screen"
	n/a



5. Close the **PAN** display, and with your input fader selected, move the **FX1** rotary control to adjust the FX send.

You can confirm that you are adjusting the Aux send level by flipping the Main Mix display to the **SMART PANEL** and looking at the upper row of faders as you move the **FX1** control:



You should also see level on the **FX1 VU** meter.

6. Now press **SEL** on **RFX1** Smart Panel controls.
7. Turn either control to adjust the FX return level to the stereo Master mix.

The FX Return input channels are stereo channels, so settings can be applied to both left and right by selecting the input and adjusting the EQ, DYNAMICS, etc. panels.

Note

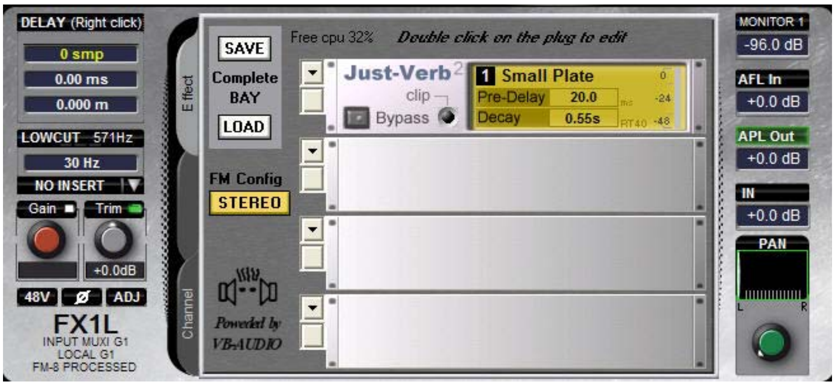
Note that you can adjust the left and right sides independently by deploying the component channels to the Smart Panel, see Page 189 for details.

Controlling the Effect

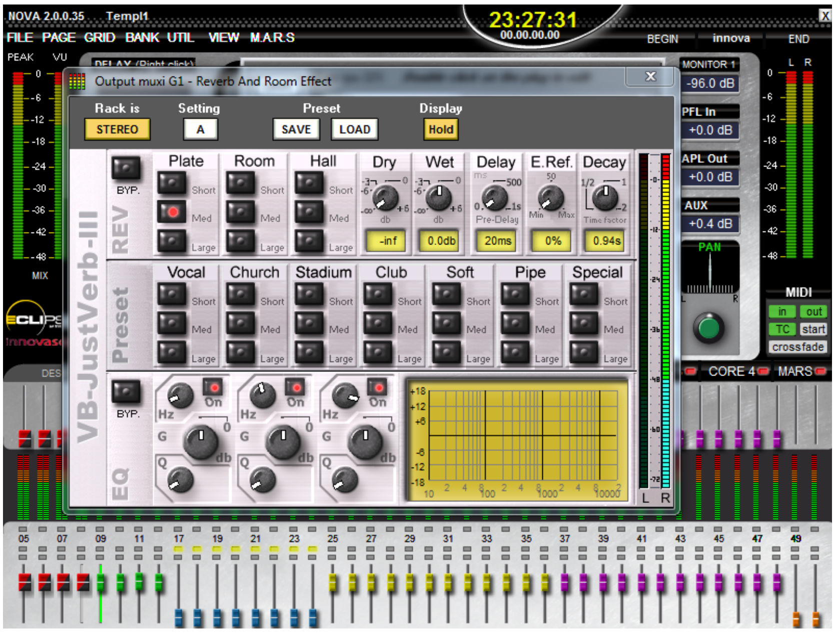
1. To view and control the effects processing, you can either:

- Press **SEL** on the **FX1** Aux channel and click on the **Output** processing tab.
- Or, press **SEL** on the **RFX1** return and click on the **Effects** processing tab.

Both access the same effects bay:



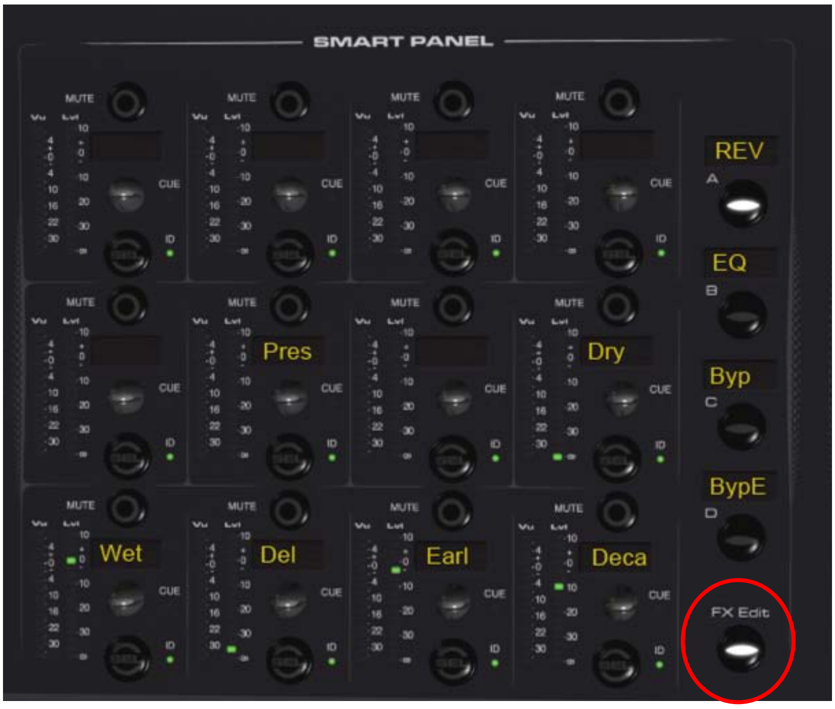
2. Double-click on the **Just-Verb** module to open the Effects Editor window:



3. If you want the Effects Editor window to open every time you select the FX send or return channels, then turn on Display **Hold** as shown above.

Tip

4. You can adjust parameters on-screen, or assign the controls onto the console's Smart Panel by pressing the **FX Edit** button.



5. Turn the rotary controls to adjust the labelled parameters.

You can view the parameter values on the Effects Editor window.

For some plug-ins like the **Just-Verb**, there may be more than one page of controls:

6. Press the Smart Panel **A**, **B**, **C** and **D** buttons to page through the different sets of effects controls.
7. When are finished, deselect **FX Edit** and press **SEL** on one of your input faders to return your input channels to their normal operation (main channel level).

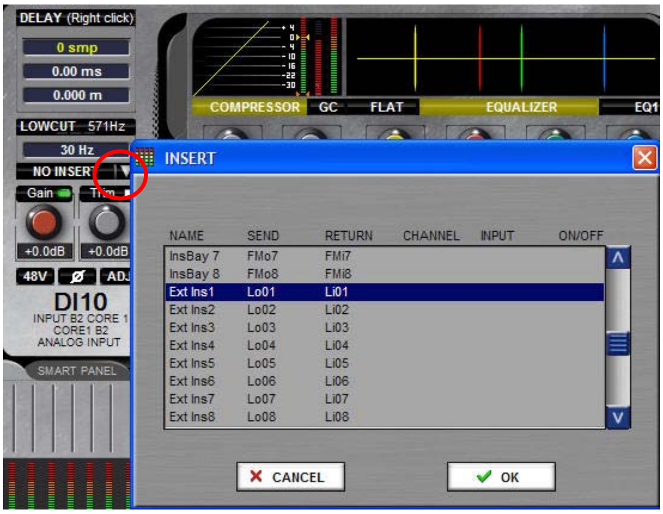
Inserting an External Device

The **Templ1** file pre-configures 16 mono inserts:

- 8 mono internal effects bays (patched to and from the second FM8-VB card)
- 8 Local Line Level inserts (patched to and from the first eight line level I/Os on the Sy80 card). See Appendix A.

To insert an external device:

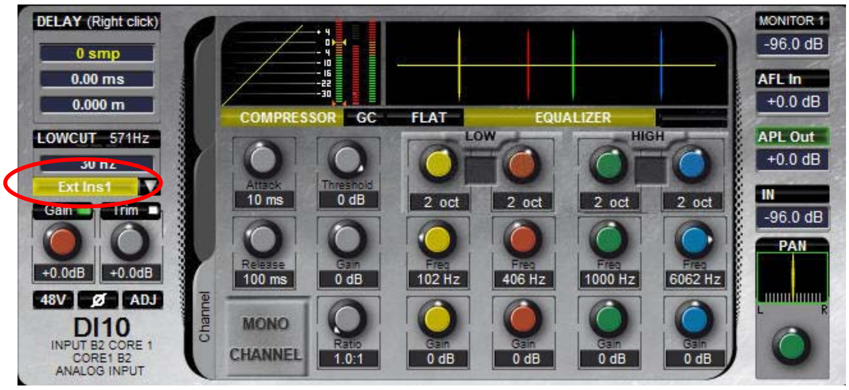
1. Connect your device to Line Level input 1 and output 1.
2. Press **SEL** on your input channel.
3. From the Main Mix display, click on the down arrow beside the insert on/off button to open the INSERT selection list:



NAME	SEND	RETURN	CHANNEL	INPUT	ON/OFF
InsBay 7	FMo7	FMi7			
InsBay 8	FMo8	FMi8			
Ext Ins1	Lo01	Li01			
Ext Ins2	Lo02	Li02			
Ext Ins3	Lo03	Li03			
Ext Ins4	Lo04	Li04			
Ext Ins5	Lo05	Li05			
Ext Ins6	Lo06	Li06			
Ext Ins7	Lo07	Li07			
Ext Ins8	Lo08	Li08			

4. Select the insert you wish to assign - **Ext Ins1** - and **OK**.

*The insert point named **ExtIns1** is now assigned to the channel and is automatically switched on:*



As this is an external insert, you need to control settings on the outboard device! However, if you insert an internal effects bay, you can control and store its settings by clicking on the **InsPre** processing tab. See Page 309 for more details on Inserts.

Using VCA Grouping

The **Templ1** file configures 6 VCAs on Faders 34 to 39 plus additional VCAs on Smart Panel layer C. There is no pre-configured routing, so to use these VCAs follow these steps:

1. Press and hold the **SEL** button on the VCA Fader strip, or Smart Panel controller.
2. Then press the **SEL** buttons on each fader or Smart Panel strip you wish to assign.

Note

Note that you can assign any combination of input, Aux, Group, Master or Matrix channels to each VCA.

3. Move the VCA fader to adjust the main level of all slave channels.

The VCA behaves like an analogue VCA with non-moving slave faders. This allows you to see and update slave fader positions even if the VCA master is closed.

4. Press **MUTE** on the VCA Fader strip to mute or unmute the slave channels.

The VCA **MUTE** will not override any existing slave channel **MUTE**s. This is indicated on the slave channels as follows:

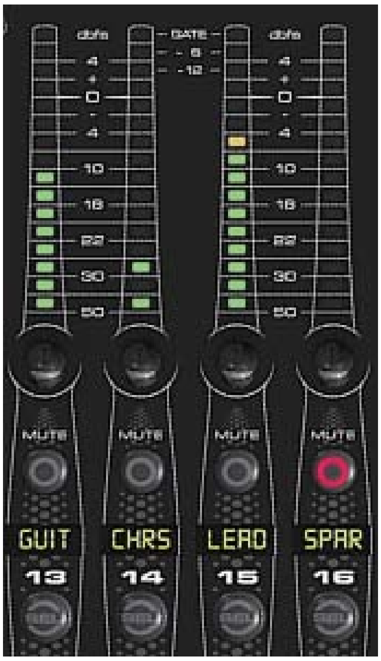
- **MUTE** flashing – the channel is muted *only* by the VCA. When you unmute the VCA, the channel **MUTE** cancels.
- **MUTE** steady state - the channel **MUTE** is active; it will not be affected by the VCA **MUTE**. To unmute the channel you must unmute both the VCA and the slave.

Note that a VCA controls level and M**UTE** only; you cannot apply master control of EQ, Dynamics, etc and you cannot **CUE** a VCA.

Note that you may route a channel to multiple VCAs if you wish. For more details, see Page 193.

Labels

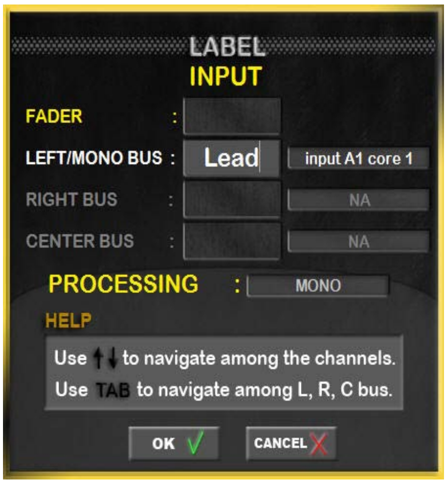
So far we have used the default labelling provided by the **Templ1** file. However, it is simple and easy to change these 4-character Labels as follows:



1. Press **SEL** on the input channel you wish to Label.
2. Then press [**F3**] on the console keyboard.

A switch on the User Defined panel can also be assigned to this function, see Page 322.

The INPUT LABEL window appears:


LABEL
INPUT
FADER :
LEFT/MONO BUS : Lead input A1 core 1
RIGHT BUS : NA
CENTER BUS : NA
PROCESSING : MONO
HELP
Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

3. In the **LEFT/MONO BUS** field, enter a new 4-character Label from the keyboard.

*This labels the input source – in our example, **Lead**. The label will appear on the Fader strip, Main Mix and Patch displays.*

4. Confirm by pressing **OK**.

You can Label a range of Faders or Smart Panel strips by selecting [**ALT**] + [**F3**]; each time you press **OK**, the next strip is selected.

Or, having opened the Label window, use the up and down arrows to navigate among the channels of the desk.

For more details on Labels, see Page 200.

Monitoring and Headphones

Eclipse provides a dedicated stereo bus for monitoring. This bus can feed up to three monitor and headphone circuits, each with independent level control.

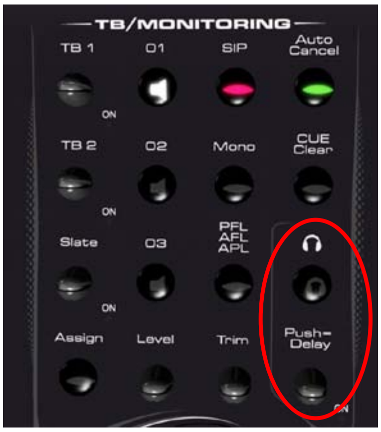
The **Templ1** File patches the **Monitor 01** circuit to UM-8PO outputs 15 and 16 on the rear of the console. In addition, the ¼“ jack socket, at the front of the console, is automatically patched from the **Headphone** circuit.

Note

Note that the **Templ1** file loads some default Monitor preferences:

- The monitor bus is automatically fed from the stereo Master when no other **CUE** is active. This is why the **CUE** button on the Master fader (Fader 47 cannot be turned off.
- Both Headphones and the Monitor 01 circuit receive the same CUE bus but with separate level controls:

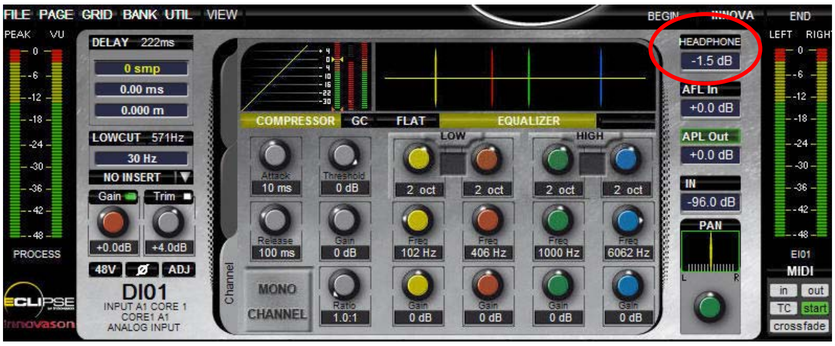
To modify the monitoring preferences, see Page 217.



⏩ To control the headphone output:

1. Turn the Headphone rotary control on the TB/MONITORING panel marked opposite.

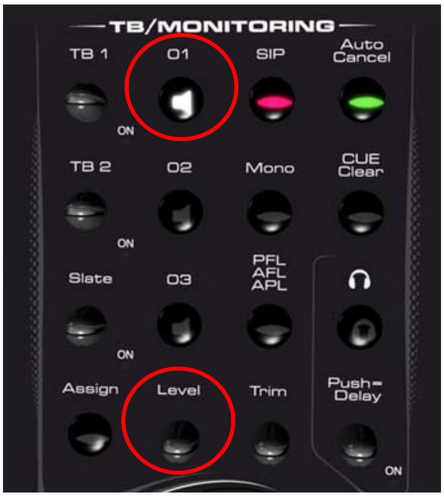
As you move the control you will see the **HEADPHONE** circuit level appear at the top right of the Main Mix display:

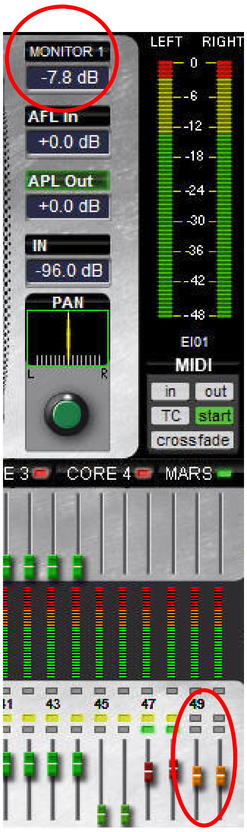


The Headphone mute button and **Push Delay** function are reserved for future implementation.

⏩ To control the Monitor 1 output:

1. Make sure that the **O1** button is lit on the TB/MONITORING panel.
2. Then turn the **Level** control:





As you move the control you will see the **MONITOR 1** circuit level appear at the top right of the Main Mix display, and on the orange Monitor faders.

⏩ CUE Modes

1. To change the CUE mode press the **PFL/AFL/APL** button:

If an input channel is selected the button toggles between AFL and PFL.

If an output channel is selected, the button cycles through AFL, PFL and APL (After Processing Listen).

2. To select Solo-in-Place, press **SIP**.

Only input channel CUEs can operate in Solo-in-Place.

3. To make input channel **CUE** buttons exclusive, select **Auto Cancel**.
4. To clear all **CUE** selections, press **Clear Cue**.

For more details on Monitoring and Cue modes, please see Page 206.

Saving Your Settings

After all your hard work, it is vital that you save your new mix settings to the Nova hard disk. The simplest method is to save the File.

Warning

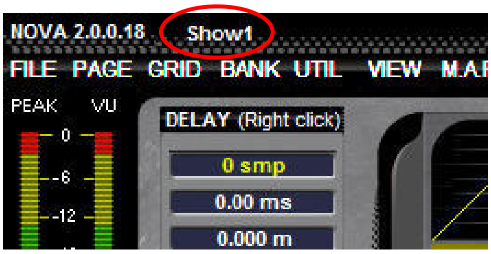
Warning

If you *DO NOT* save a File and power off the console, you will lose your settings. This is because the desk settings are held in memory, and are only stored permanently when you save Pages onto the Nova hard disk.

To save your settings, you can use either:

- "**File -> Save**" – saves all the Pages in memory into the active File.
- "**File -> Save As**" – saves all the Pages in memory into a new File which you can name. See Page 91.

Remember that the active File name is displayed at the top of the Main Mix display:

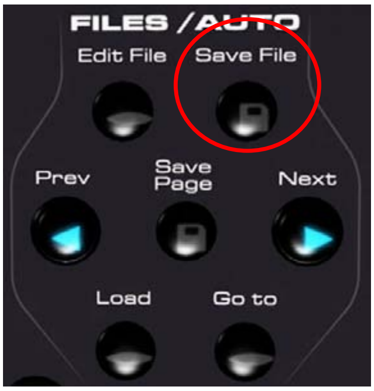


If you've already created a new user File, then "**File -> Save**" is the quickest method (see below). If not, use **Save As**. This way you won't overwrite the template, or someone else's File!

	Save File **(FILES/AUT0)**
	"FILE -> Save"
	n/a

To save the active File:

1. Press the **Save File** button on the FILES/AUTO panel:



The button lights (red) as data is writing to the hard disk.

See Chapter 7 for more details on Files and Pages.

Chapter 5: Console Operation

Introduction

This chapter covers the console operation in more detail. First, we will cover the operation of the different channel types:

- **Input Channels** – Page 133.
- **Smart Fader (SFAD) Inputs** – Page 149.
- **Mix Busses**:
  - Signal Flow and Routing - Page 159.
  - Bus Sends – Page 163.
  - Output channels – Page 173.
- **Stereo Channels** – Page 184.
- **VCAs** – Page 193.

Then other general operation topics:

- **Assignable Delays** – Page 197.
- **Labels** – Page 200.
- **Monitoring** – Page 206.
- **Talkback** – Page 218.

Note that channel Inserts, Internal Effects and the User Defined Panel are covered in Chapter 6. This is also where you can learn more about console configuration and patching.

Note

Fader Strips and the Smart Panel

Channels are only active on Eclipse when they are assigned to the surface. In other words, what you see is what you get!

Eclipse provides 48 Fader strips plus 48 Smart Panel rotary controllers (available in 4 layers: A, B, C and D). Each may control any input, output (Aux, Group, Master or Matrix) or act as a VCA, Smart Fader, etc.

Please refer back to Page 58 for the operation of Fader Strips and Smart Panel controllers. This section deals with the rotary control (pot) configuration.

Fader Strips: User Pot Assignment

The rotary control on the Fader strips is switched globally between one of the three modes: **Gain**, **Pan** or **User**.

When in **User** mode, the pot can control any variable parameter – for example, EQ Gain, Compressor Threshold, etc.

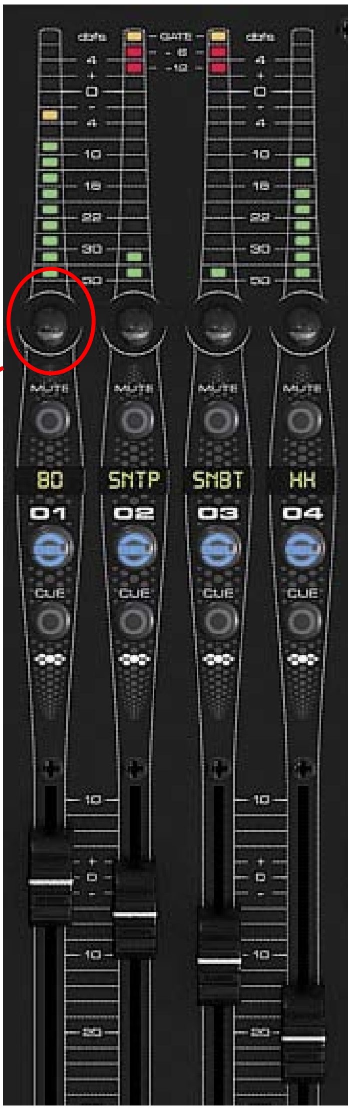
Assignments can be made channel by channel, or you can assign the same parameter to all pots across the console. This option is set from the User Pot Configuration.

The assignments are stored in the current Page, and can be copied to other Pages using the Over Ram function. This allows you to configure different pot functions for different Pages of the show.

⏩ To assign a parameter:

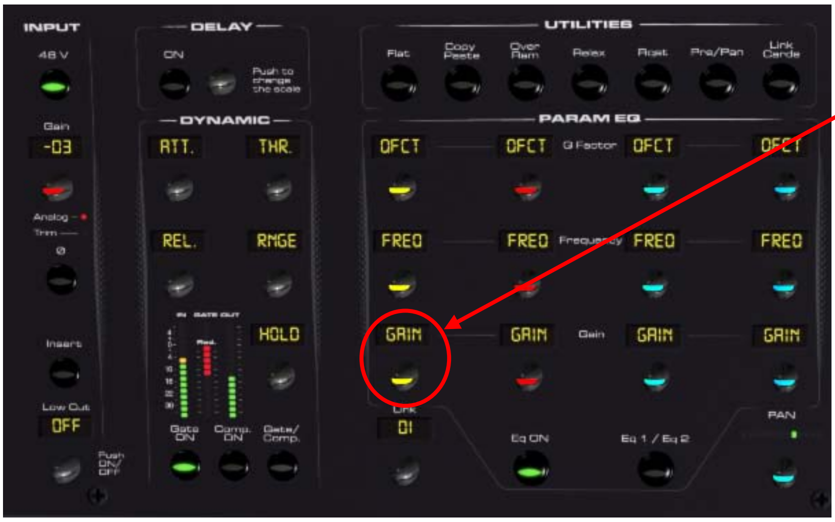
1. Make sure that **User** mode is selected (press the **Pot.** button beside the trackball to cycle through the options).

The green LED next to User should be illuminated.



2. On the Fader strip, press and hold down the pot you wish to assign.

The available functions flash in the Label displays on the Eclipse front panel:

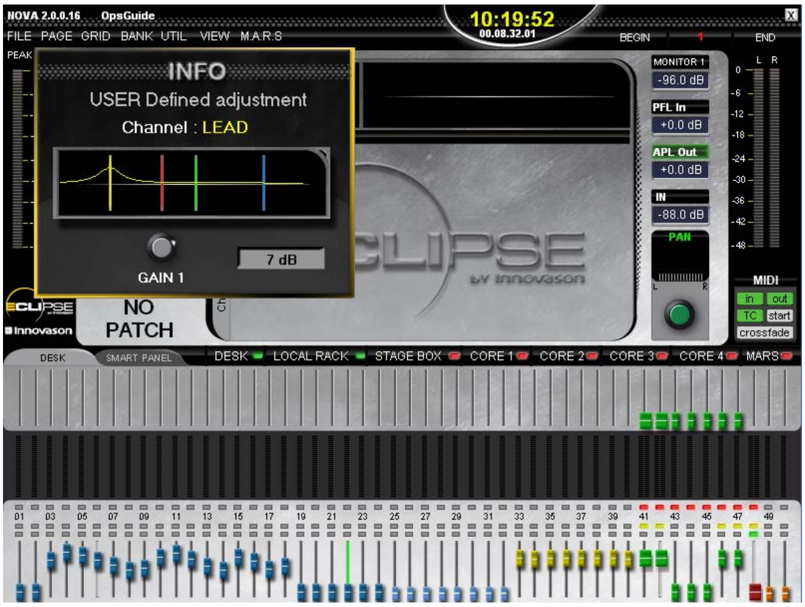


3. Keep holding down the pot, and press down on one of the flashing controls – e.g. EQ Band 1 **GAIN**.

The Fader strip pot is assigned to the selected function.

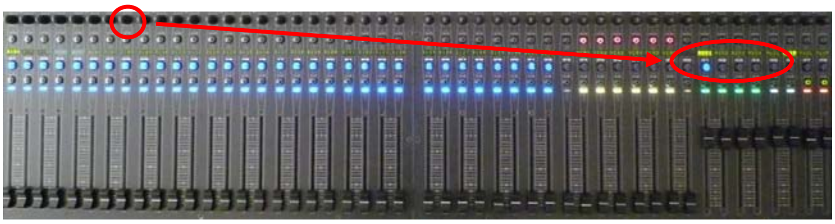
4. Test the assignment by turning the pot on the Fader strip.

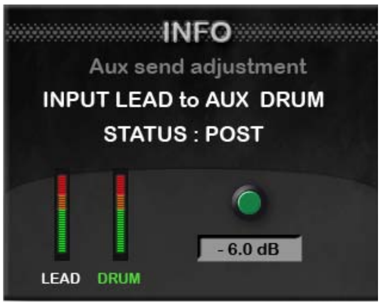
An INFO pop-up appears showing the name of the parameter you are controlling:


INFO
USER Defined adjustment
Channel : LEAD
GAIN 1
7 dB

Note that you can assign an Aux send if you have Aux channels assigned to the console surface. The available sends are indicated by flashing **SEND** Labels on the Aux Fader strips.

5. While holding down the pot, press one of the Aux channel **SEL** buttons to assign the send:





INFO
Aux send adjustment
INPUT LEAD to AUX DRUM
STATUS : POST
- 6.0 dB
LEAD DRUM

The pot is assigned to the Aux send.

6. Turn the pot on the Fader strip to confirm the assignment in the INFO window.
7. Repeat the process to choose a different control or to assign a pot on a different Fader strip.

Note

Note that the same parameter may be assigned globally to *all* pots across the console. This option is defined in the User Pot Configuration (see Page 130). If the option is active, then you cannot assign different parameters to different channels.

⏩ Saving User Pot Assignments

User pot assignments are saved in the current Page when you save the Page or File. This allows you to configure different User pot assignments for different Pages of your show if you wish.

⏩ Over Ram for User Pot Assignments

Having assigned User pots across the console, you can copy these assignments into other Pages of the File using the **OVERRAM** display. Select the **Faders pots** option when choosing the Over Ram parameters, see Page 399 for details.

Fader Strips: Pot Configurations

Each of the **Gain**, **Pan** and **User** modes can be customised from its own Pot Configuration window.

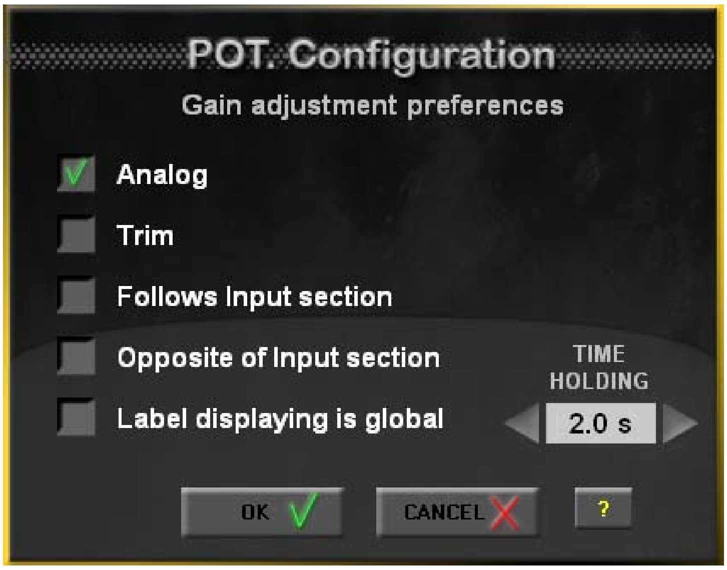
To open the configuration window:

1. Press the **Pot.** button to select the mode you wish to configure – e.g. **Gain**.

The green LED next to Gain should be illuminated.

2. Then press and hold the **Pot.** button for more than 2 seconds.

The Gain configuration window opens:



POT. Configuration

Gain adjustment preferences

☑ Analog

☐ Trim

☐ Follows Input section

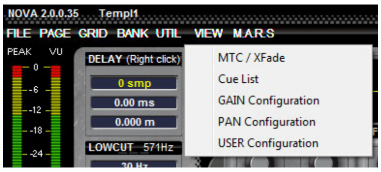
☐ Opposite of Input section

☐ Label displaying is global

TIME HOLDING 2.0 s

You can open the Pan and User pot configuration windows in a similar manner.

Alternatively they can be opened from the **VIEW** menu:



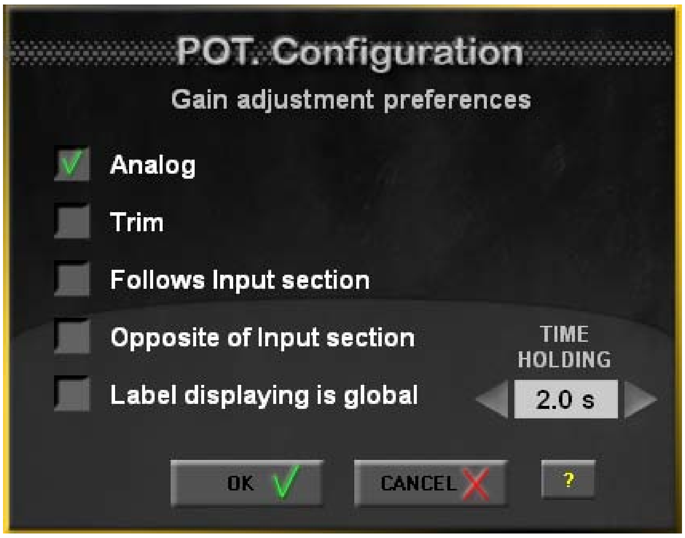
- **VIEW** -> **Gain Configuration**
- **VIEW** -> **Pan Configuration**
- **VIEW** -> **User Configuration**

3. Select the option(s) required.
4. Then press **OK** to make the configuration active.

Gain Pot Configuration

ECLIPSE	**Pot. = Gain** **(press & hold)**
🖱	**“VIEW -> Gain Configuration**
⌨	**n/a**

This window determines the rotary control options when the Pot mode is switched to **Gain**:



POT. Configuration

Gain adjustment preferences

☑ Analog

☐ Trim

☐ Follows Input section

☐ Opposite of Input section

☐ Label displaying is global

TIME HOLDING 2.0 s

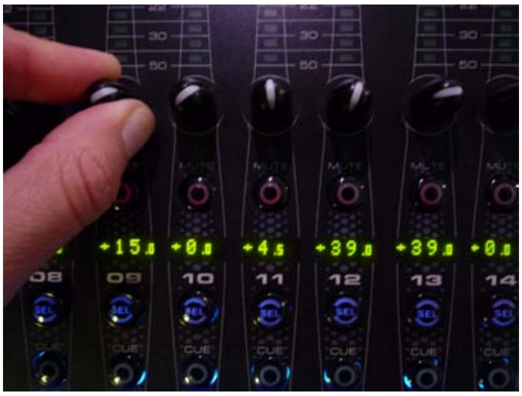
The first four options are exclusive and determine the function of the Fader strip pot. The selection is applied globally across the console. Select from:

- **Analog** – analogue gain:
    - On input channels, this adjusts analogue mic preamp gain (SI-8D3 inputs only).
    - On output channels, this adjusts analogue output gain (UM8 processed outputs only).
- **Trim** – digital gain:
    - Available for all input channels.
    - On output channels, digital trim is only available if the channel has floating DSP (see Page 175).
- **Follow Input Section** – the pot follows the choice of Analog or Trim made on the INPUT panel.
- **Opposite of Input Section** - the pot follows the opposite choice of Analog or Trim made on the INPUT panel.

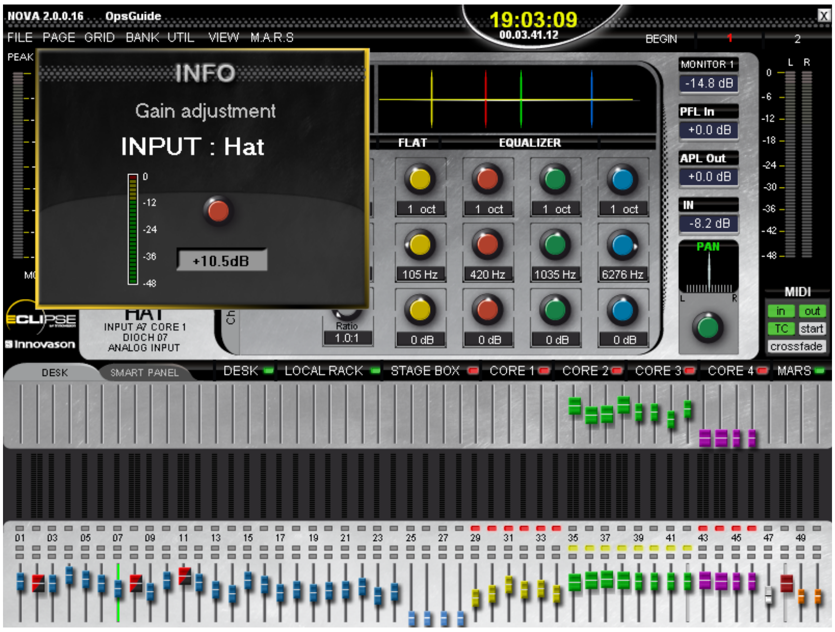
The remaining options are:

- **Label displaying is global** – this will display your chosen parameter value globally across all Fader strip Labels when you adjust a control.

For example, if you have selected **Analog** gain, and turn a pot to adjust mic gain on an input channel, then the analog gain for all other channels is displayed globally across the console:



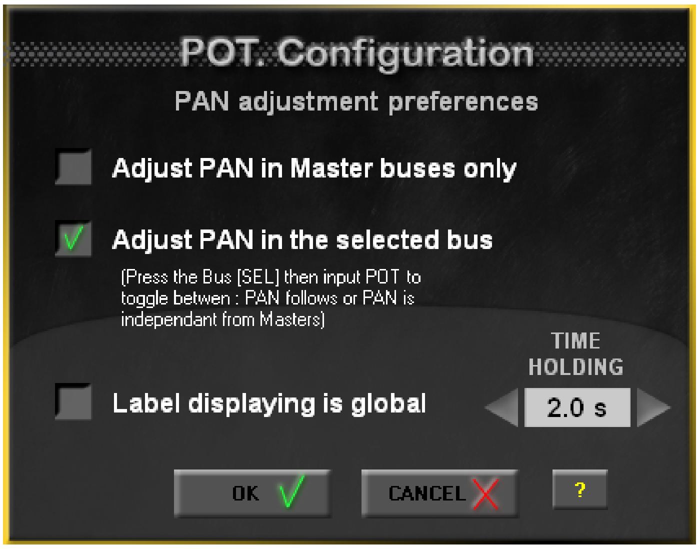
- **TIME HOLDING** – enter a time (e.g. 2 seconds). This is the length of time for which the INFO pop-up window appears on the Nova display when you adjust a pot in **Gain** mode:



Pan Pot Configuration

ECLIPSE	**Pot. = Pan** **(press & hold)**
🖱	**“VIEW -> Pan Configuration**
⌨	**n/a**

This window determines the rotary control options when the Pot mode is switched to **Pan**:



POT. Configuration

PAN adjustment preferences

☐ Adjust PAN in Master buses only

☑ Adjust PAN in the selected bus

(Press the Bus [SEL] then input POT to toggle betwen : PAN follows or PAN is independant from Masters)

☐ Label displaying is global

TIME HOLDING 2.0 s

The first two options are exclusive and determine whether panning to stereo Auxes can be independent from the main channel pan:

- **Adjust PAN in Master busses only** – panning is always dependent (i.e. the Aux send follows the main channel pan position).
- **Adjust PAN in the selected bus** – panning can be switched between dependent and independent for each input which feeds a stereo Aux send (see next page).

The remaining options are:

- **Label displaying is global** – pan position is displayed globally across all Fader strip Labels when you adjust a control (as for the Gain Pot configuration).
- **TIME HOLDING** – enter a time (e.g. 2 seconds). This is the length of time for which the INFO pop-up window appears on the Nova display when you adjust a pot in **Pan** mode (as for the Gain Pot configuration).

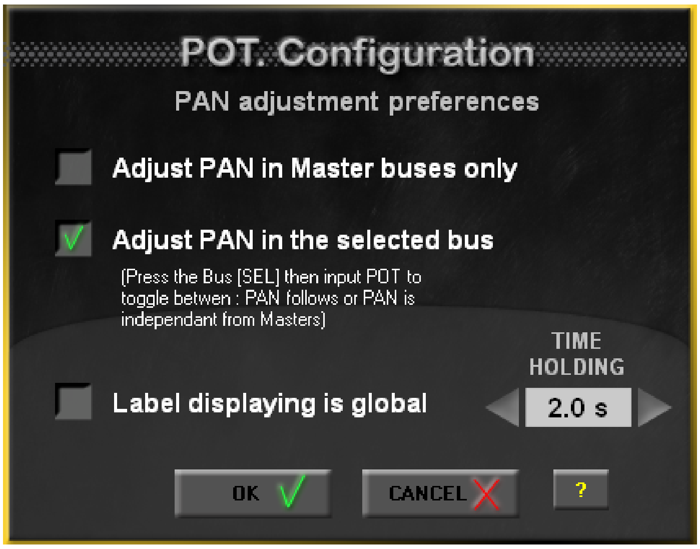
Controlling Independent Panning

The first two options in the Pan Configuration window determine whether panning to stereo Auxes is dependent or independent from the main channel pan:

- **Adjust PAN in Master busses only** – panning is always dependent (i.e. the Aux send follows the main channel pan position).
- **Adjust PAN in the selected bus** – panning can be switched between dependent and independent for each input which feeds a stereo Aux send.

To switch an aux send to independent pan:

1. First make sure that the **Adjust Pan in the selected bus** option is enabled within the Pan Configuration window:



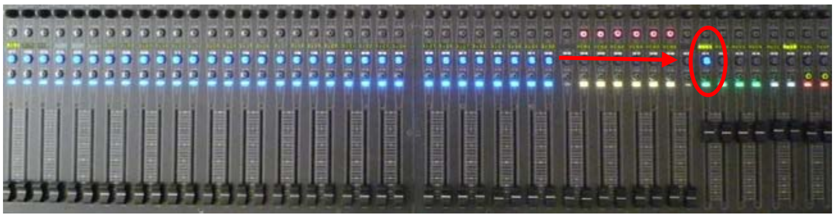
POT. Configuration
PAN adjustment preferences
☐ Adjust PAN in Master buses only
☑ Adjust PAN in the selected bus
(Press the Bus [SEL] then input POT to toggle betwen : PAN follows or PAN is independant from Masters)
☐ Label displaying is global
TIME HOLDING 2.0 s

2. Then switch the Fader strip pots to Pan mode.

The green LED next to Pan should be illuminated.

3. Press **SEL** on your Aux master channel so that the input faders feeding the Aux switch into “Aux send” mode:

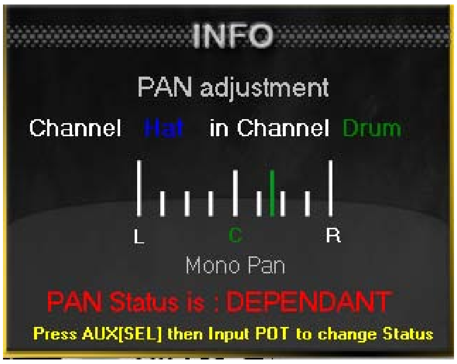
*The steady state **SEL** buttons indicate bus assignments to the selected Aux - in our example, a range of input channels are assigned to the Aux:*



If you move your input faders, you should be adjusting the Aux send levels.

4. Now turn the pot on one of the input faders feeding the Aux.

An INFO window appears:


INFO

PAN adjustment

Channel Hat in Channel Drum

Mono Pan

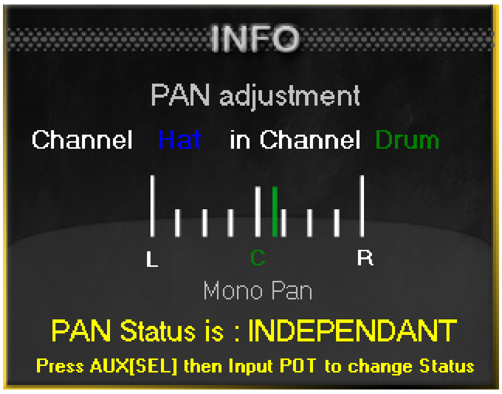
PAN Status is : DEPENDANT

Press AUX[SEL] then Input POT to change Status

In our example, we are panning from the input labeled Hat to the Aux channel labeled Drum. The status is that the pan is dependent – it follows the main channel pan position:

5. To switch the Aux send to independent panning, press down on the pot.

The INFO window updates to show that panning is now independent:


INFO

PAN adjustment

Channel Hat in Channel Drum

Mono Pan

PAN Status is : INDEPENDANT

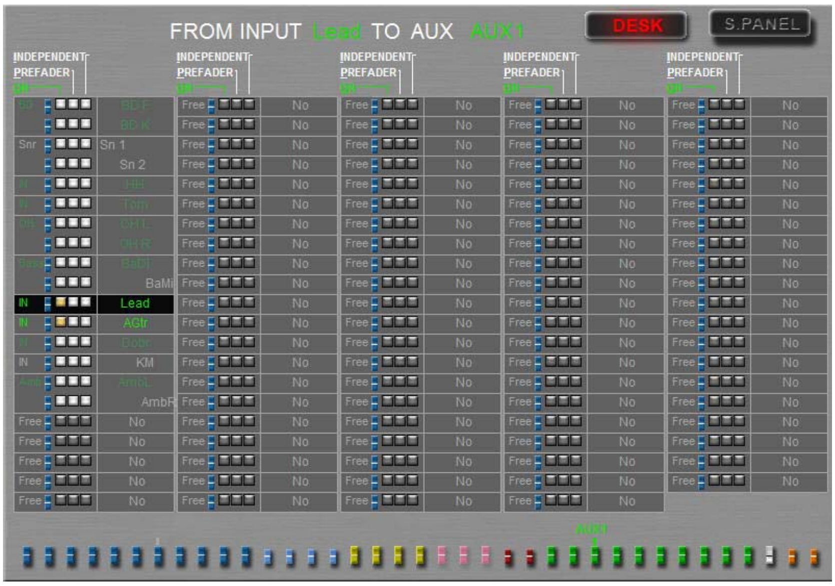
Press AUX[SEL] then Input POT to change Status

6. Turn the control to adjust the independent pan position.

Panning from the input to the selected Aux is adjusted. The main channel pan and other stereo aux sends are unaffected.

7. Repeat for any other channels which require independent panning to the selected Aux.
8. Then press **SEL** on your next stereo Aux channel and repeat the process to configure another send mix.

Note that you can get an overview of the Aux panning status from the **Pan** display:



	Pre/Pan (UTILITIES)
	“GRID -> Pan”
	[F11]

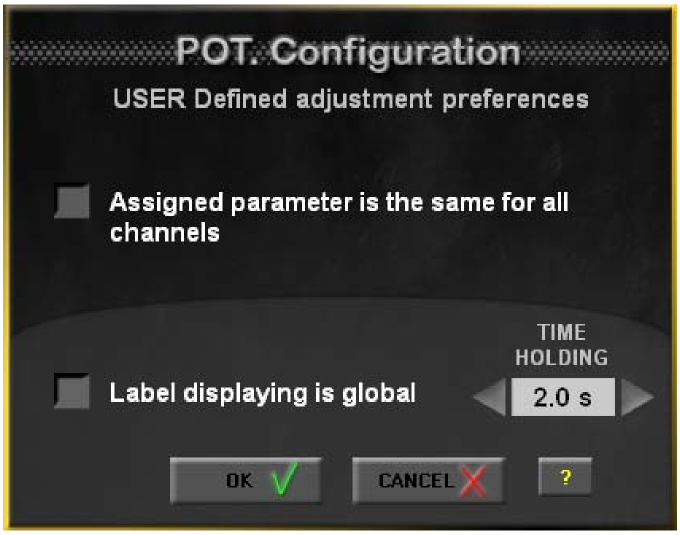
Any changes you make to the pan status from the console are reflected on this display and vice versa.

You will need to use this display if you wish to switch Aux sends from dependent to independent pan when working offline. See Page 164 for details on this display.

User Pot Configuration

	Pot. = User **(press & hold)**
	"VIEW -> User Configuration
	n/a

This window determines the rotary control options when the Pot mode is switched to **User**:



POT Configuration

USER Defined adjustment preferences

☐ Assigned parameter is the same for all channels

☐ Label displaying is global

TIME HOLDING 2.0 s

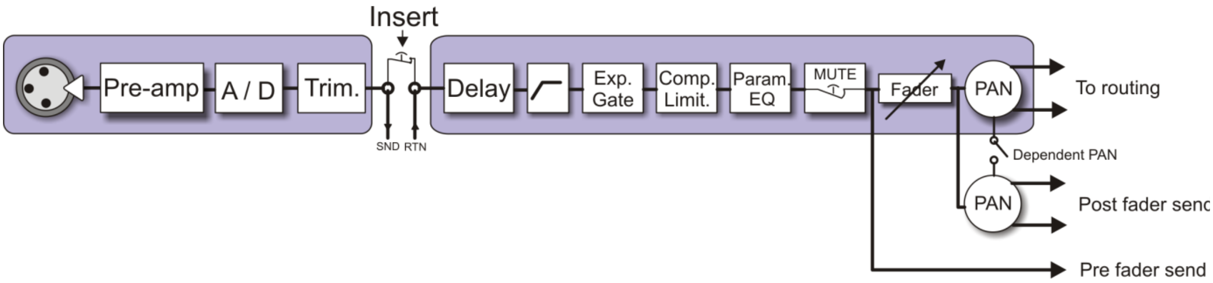
The options are:

- **Assigned parameter is the same for all channels** – when this option is enabled, changing the pot assignment updates pots across all channels of the console. See Page 120 for details on how to assign a function.
- **Label displaying is global** – pan position is displayed globally across all Fader strip Labels when you adjust a control (as for the Gain Pot configuration).
- **TIME HOLDING** – enter a time (e.g. 2 seconds). This is the length of time for which the INFO pop-up window appears on the Nova display when you adjust a pot in **Pan** mode (as for the Gain Pot configuration).

Input Channels

Signal Flow

The console's DSP supports 104 mono input channel paths.



Each path provides:

- Analogue input control (preamp gain and 48V)
- Digital input control (digital gain trim and phase reverse)
- A Low Cut Filter
- Dynamics (independent Gate and Compressor)
- Delay – assignable from a pool of 48 delay resources.
- Parametric EQ (4-band, with upper and lower bands switchable to a shelf or high/low pass filter)
- Pre-fader Insert (external device or internal effects bay)
- Pan (or Balance and Width on stereo channels)
- Main level, Mute and Cue
- Aux Send Level (pre-fader, post-fader or independent)
- Matrix Send Level (post-fader)

An input Fader or Smart Panel controller can be either mono or stereo (left/right). This decision is made when you patch inputs to the control surface (from the **PATCH IN** grid).

Note that a stereo channel uses 2 mono DSP resources.

Note

For now, we are going to concentrate on a mono input channel. You can find more details on Stereo channels on Page 184.

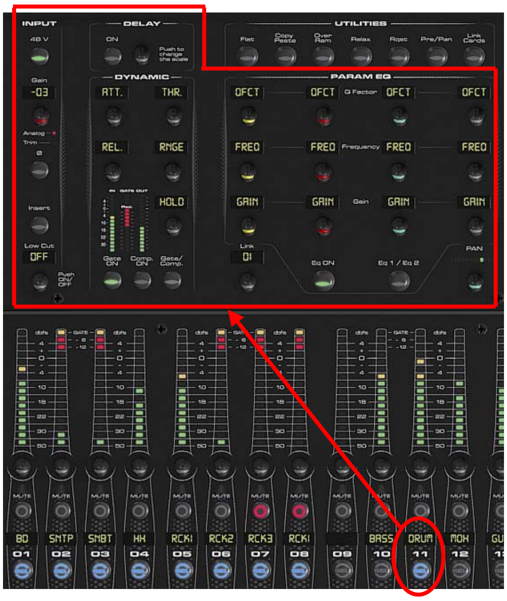
Selected Channel Control

1. Press the **SEL** button on an input Fader or Smart Panel control strip.

Make sure that this fader is directly controlling the input, and is not a Smart VCA (Fader which controls a Smart Faders zone), see Page 149 for details.

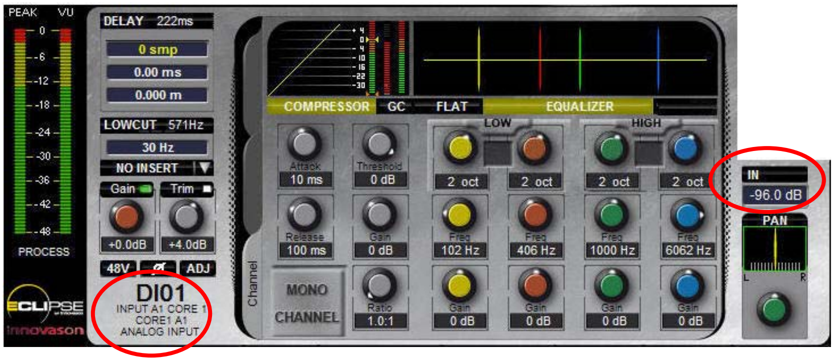
*The **SEL** button and Label flash when active.*

The INPUT, DELAY, DYNAMIC and PARAM EQ panels now offer direct access to input parameters:



The controls work in conjunction with the Main Mix display:

2. Make sure that the **Channel** tab is selected:



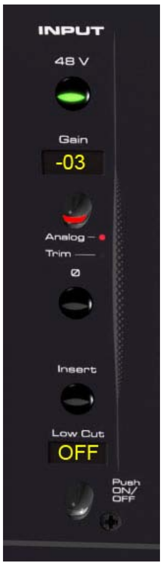
Also keep an eye on the highlighted areas which confirm the type of channel and where it is patched from:

- **IN** – confirms that this is a mono input channel with a Main level of -96.0dB.
- **DIO1** - this is the 4-character user Label for the source (also displayed above the input fader).

For more details on Labels see Page 200. For more details on the Main Mix display see Page 67.

INPUT

The INPUT section controls analogue and digital input settings. You will be presented with slightly different controls depending on where your input is connected:



- Inputs connected to a SI-8D3 Mic/line card feature full analogue control (mic preamp Gain and 48V) plus digital Trim and phase reverse. For these inputs you should set the analogue gain for the best A-D conversion, and then use the digital Trim to set your personal operational level.
- Other inputs (DSP Line inputs, DI-8S or DI-8Src AES inputs and Ethersound inputs) have digital Trim and phase reverse only.

Note that you can set a display offset for microphone input gain from the General Preferences, see Page 428.

Analogue Input Control (SI-8D3 inputs only)

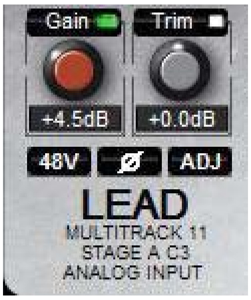
To remotely control the microphone preamplifier within the analogue domain prior to the A-D conversion:

1. Press down on the Gain rotary control until the Analog LED is lit.
2. Turn the Gain control to set the mic gain.

Gain may be set from -27dB to +66dB in 1.5dB steps. The default Gain for all preamps is 0dB.

3. Press the **48V** button to select 48V phantom power.

The Main Mix display shows the status.



The phantom power supply voltage is 48V, and its current is limited to 6mA.

You can also enter settings from here – for example, click on the GAIN control to adjust input gain in 1.5dB steps.

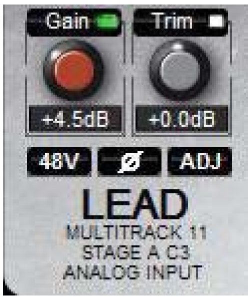
Digital Input Control (all inputs)

All inputs (Mic/Line, Line, AES or Ethersound) have a digital gain trim after any A-D or SRC conversion.

1. Press down on the Gain control until the Trim LED is lit.
2. Turn the Gain control to set the digital Trim level.

Gain may be set from -16dB to +16dB in 1.0 dB steps. The default Trim level is 0dB.

3. Press the **Ø** button to reverse the phase of the input.



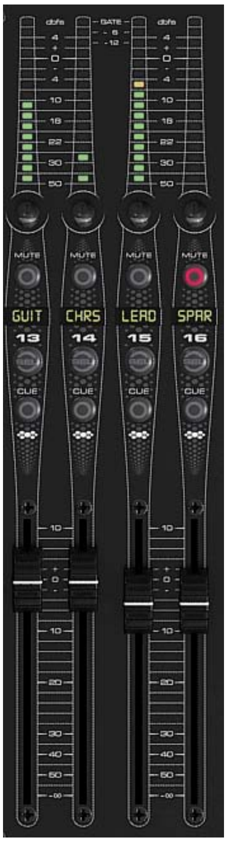
The Main Mix display shows the status of the settings.

Note that the green LED beside Gain or Trim on the Main Mix display indicates the action of the front panel Gain control.

Analogue Gain and digital Trim levels may also be adjusted from the console’s Fader strips, see Page 58 for details.

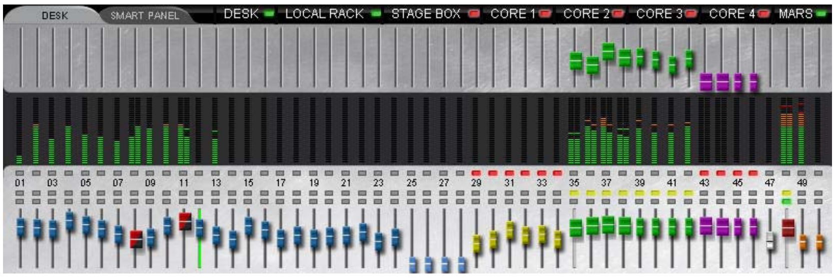
If you want to adjust a source not assigned to a fader (e.g. a Talkback mic), use the **PATCH DIRECT** grid, see Page 256.

Input Metering

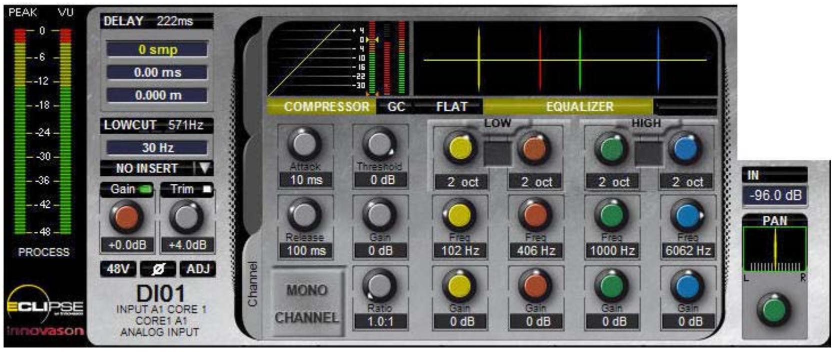


While adjusting gain, it is useful to look at the input channel metering. There are three meters you can use:

- **Fader/Smart Panel VU Meter** – on input channels this meter is always pre-fader and can be switched pre or post processing from the **General Preferences**, see Page 428. This meter also shows any Gate activity.
- Main Mix display **DESK**/**SMART PANEL** overview – these VU meters are identical to those on the console surface but do not show Gate activity:

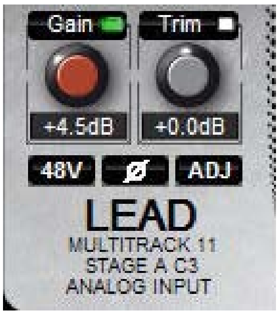


- Main Mix display **PEAK** and **VU** Metering – these two meters *always* meter the selected input pre processing with VU (average) and PEAK characteristics:



Automatic Level Adjust

This function is only available from the Main Mix display and is controlled by the on-screen **ADJ** button. You might use this function to deal quickly with a situation where all your microphone sources are suddenly very hot.



1. Click on **ADJ** to apply an automatic level adjustment to *all* input channels across the console.

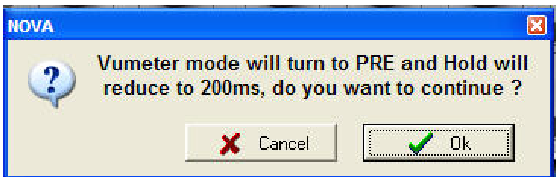
The level applied is preset within the **General Preferences** window, see Page 428. The level can only ever decrease input gain; there is no option for a + adjustment.

Tip

A rotary control on the User Defined panel can be assigned to the Auto Adjust level, see Page 322.

Note

Note that you can only use the **ADJ** mode if the console's VU meters are pre-processing with a maximum hold time of 200ms. Therefore, when you activate this function, you will be presented with the following dialogue box:



Vumeter mode will turn to PRE and Hold will reduce to 200ms, do you want to continue ?

Insert

On input channels, inserts are always pre-fader, and the inserted device can be:

- An external device connected to any input/output pair.
- An internal effects bay provided by the FM8-VB card.

The **Insert** button is used to switch the channel insert return on or off. If an insert device has not been assigned, then you cannot select this button. See Page 309 for details on inserts.

Low Cut

The Low Cut filter slope is 12 dB/octave.

1. Press down on the rotary control to switch the filter on or off.

When active, the display shows the roll-off frequency.

2. Turn the control to adjust the roll-off frequency.

Frequency may be set between 30Hz and 571Hz in 53 steps.

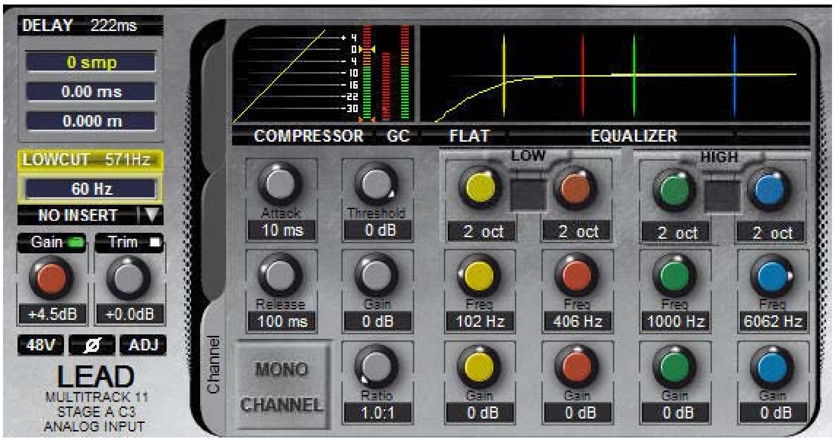
You may need to confirm before switching the filter off; this is an option set from the **General Preferences**, see Page 428.

DELAY

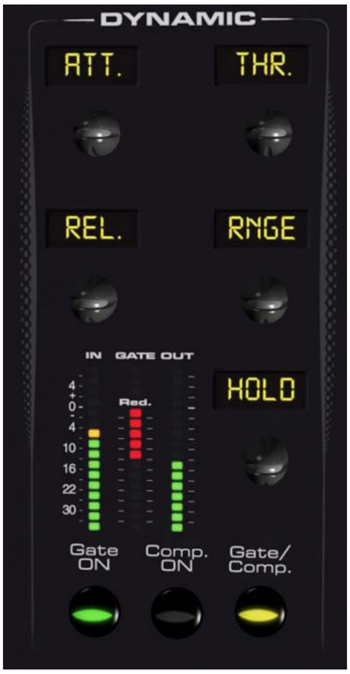
Eclipse offers a pool of 48 delays, assignable to any input or output (mix bus) channel. The delay time may be set up to 222ms and can be adjusted in samples, ms or metres. See Page 197 for details.

The Main Mix display shows the status of any **DELAY**, **LOWCUT** filtering and insert switching (**NO INSERT**).

If the low cut filter is switched on, then you will see the result of any filtering superimposed onto the EQ curve:



DYNAMIC

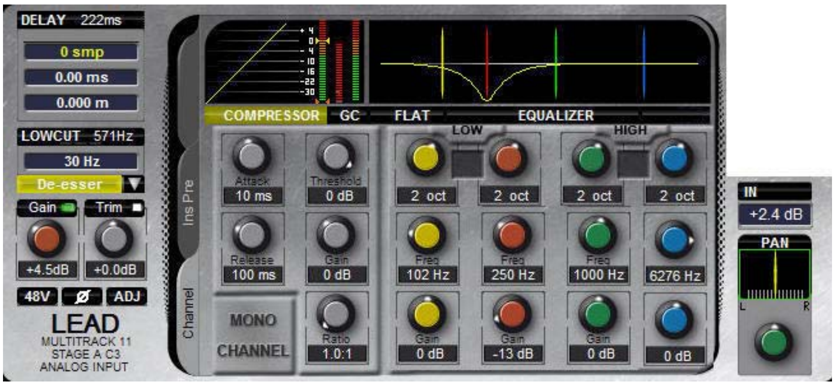


On input channels there are two sections of dynamics processing: a noise gate and a compressor.

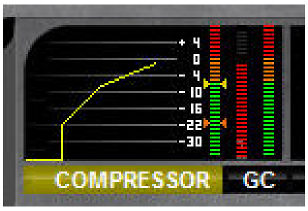
The DYNAMIC panel has 3 buttons and 5 rotary controls, which may be switched between the gate and compressor sections using the **Gate/Comp.** button. The front panel also includes metering for:

- **IN** – input level to the dynamics.
- **GATE** – gate activity.
- **Red.** – gain reduction applied by the compressor.
- **OUT** – output level from the dynamics.

The front panel controls follow the on-screen layout shown on the Main Mix display. So, for example, when adjusting the compressor, the top controls adjust **Attack** time and **Threshold**, the middle controls are **Release** time and make up **Gain**, and the lower control sets the **Ratio**:



The Main Mix display includes the same **IN**, **GATE**, **Red.** and **OUT** metering as the front panel. Note that the red and yellow markers on the input level meter represent the gate and compressor thresholds:



This area also includes a dynamics curve which shows the sum of both sections of processing: Gating plus Compression.

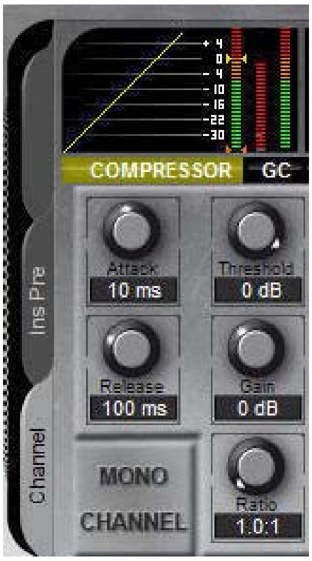
Setting a Compressor

1. Turn off the **Gate/Comp.** button so that the front panel controls are switched to the compressor.

*The **Gate/Comp.** button should be off. On the Main Mix display the control layout updates to show the compressor.*

2. Turn on the **Comp ON** button to activate the compressor.

*The button lights and on the Main Mix display the on-screen **COMPRESSOR** button lights (yellow):*

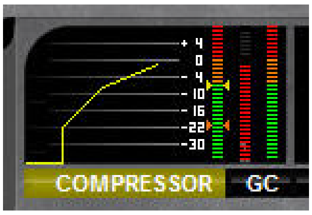


Attack 10 ms
Threshold 0 dB
Release 100 ms
Gain 0 dB
Ratio 1.0:1

3. You can now use the rotary controls to adjust the compressor.

Compressor parameters may be set as follows:

- Threshold level – from -90dB to +10dB.
- Ratio – from 1:1 (no compression) to infinity:1 (limiting)
- Attack Time – from 0.5ms to 200ms.
- Release Time – from 50ms to 10s.
- Make up Gain – from -11dB to +20dB.



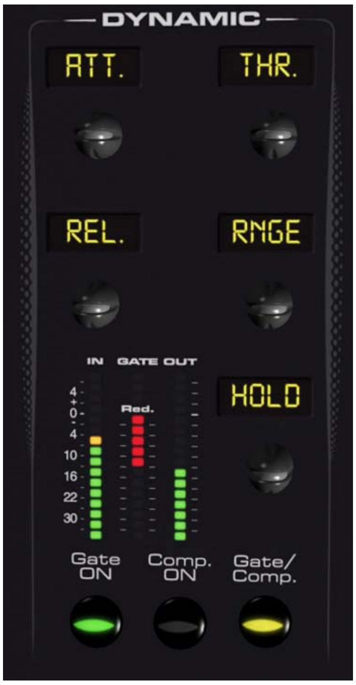
The action of the compressor is best described by looking at the dynamics curve on the Main Mix display.

Also, keep an eye on the amount of gain reduction being applied using the gain **Red.** meter.

You can reset the Compressor settings to flat using the **FLAT** button as described on Page 393.

Tip

Setting a Gate/Expander

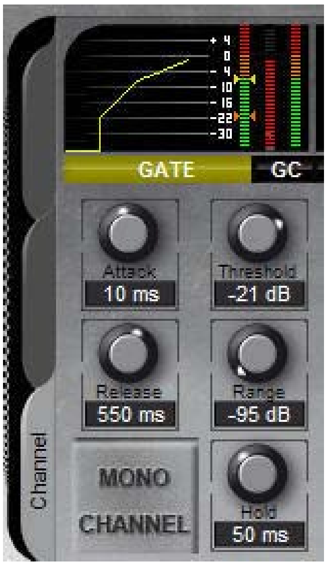


1. Turn on the **Gate/Comp.** button.

The front panel and Main Mix display controls update to show the parameters and values for the Gate section.

2. Turn on the **Gate ON** button to activate the noise gate.

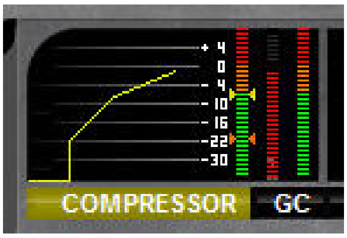
*The button lights and on the Main Mix display the on-screen **GATE** button lights (yellow):*



Attack 10 ms
Threshold -21 dB
Release 550 ms
Range -95 dB
Hold 50 ms

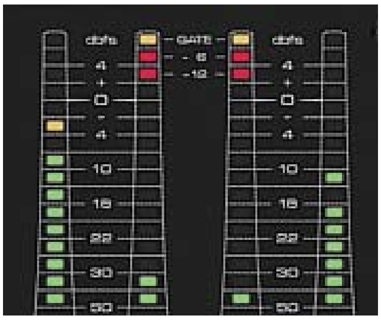
3. You can now use the rotary controls to adjust the gate.

Gate parameters may be set as follows:



- Threshold level – from -90dB to +10dB.
- Range – from -95dB to +10dB (expander)
- Attack Time – from 0.5ms to 200ms.
- Release Time – from 50ms to 10s.
- Hold Time – from 0.5ms to 10s

The action of the gate/expander is best described by looking at the dynamics curve on the Main Mix display.



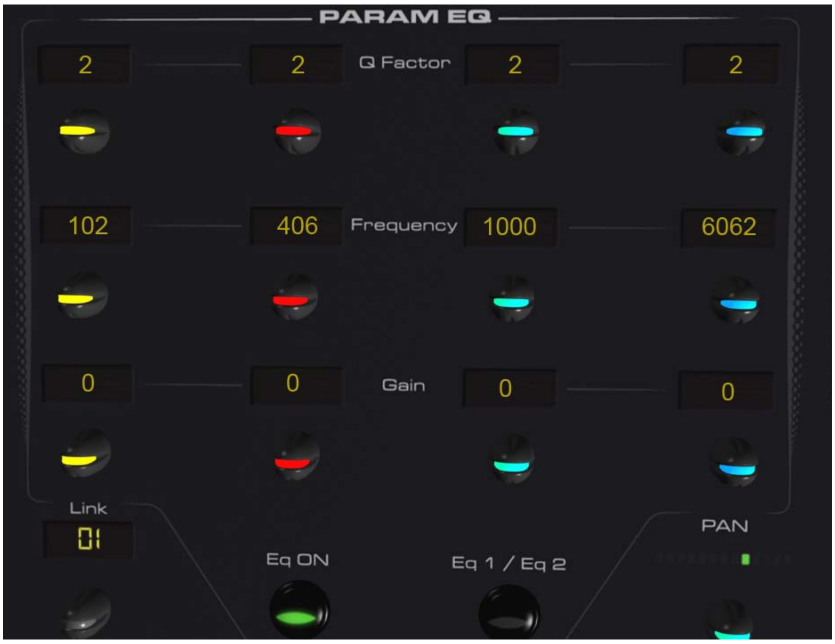
You can also see gate activity on the Fader strip VU meters. The top LED illuminates in blue when the gate is fully closed; the two LEDs below illuminate in red to indicate -6dB or -12 dB of gain reduction.

You can reset the Gate settings to flat using the **FLAT** button as described on Page 393.

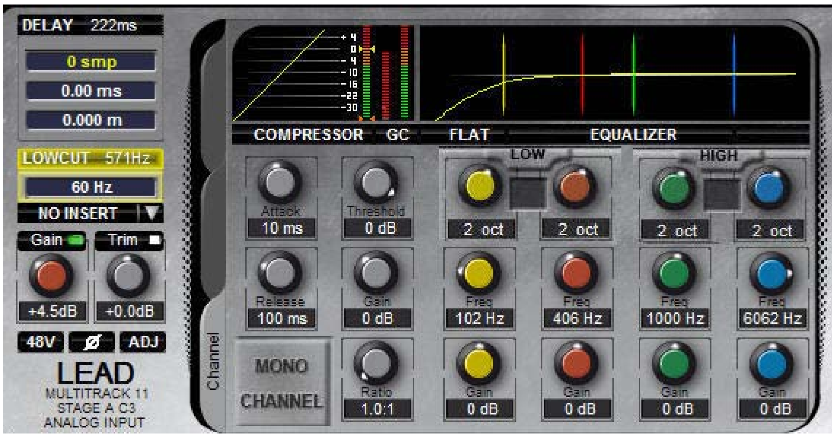
PARAM EQ

Every input channel has 4 bands of parametric EQ, with the upper and lower bands switchable to a shelf or high/low pass filter.

The PARAM EQ panel provides 12 dedicated controls; four sets of Gain, Frequency and Q (bandwidth):



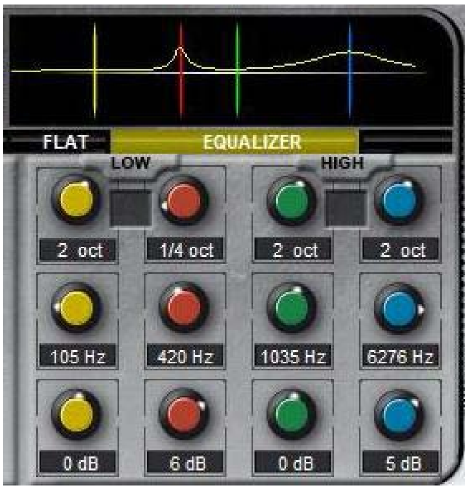
The front panel control layout is copied on the Main Mix display, and the display includes an EQ curve. Note that the EQ curve provides an overview of the combined parametric EQ and low cut filter sections:



To control equalisation:

1. Turn on the **Eq ON** button to activate the EQ section.

*The button lights and on the Main Mix display the on-screen **EQUALIZER** button lights (yellow):*



2. You can now use the rotary controls to adjust the 4 bands of parametric EQ.

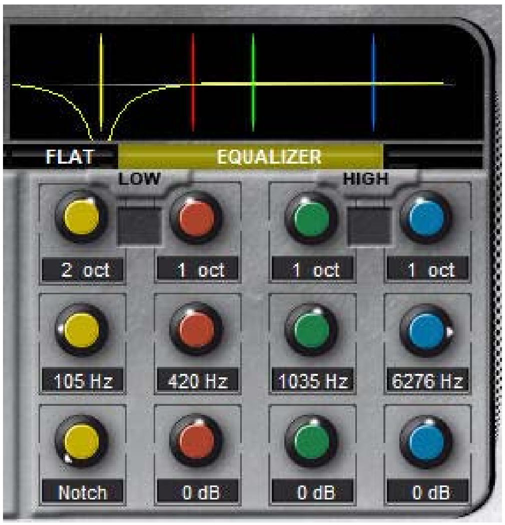
The default Frequency, Gain and Q parameters are as follows:

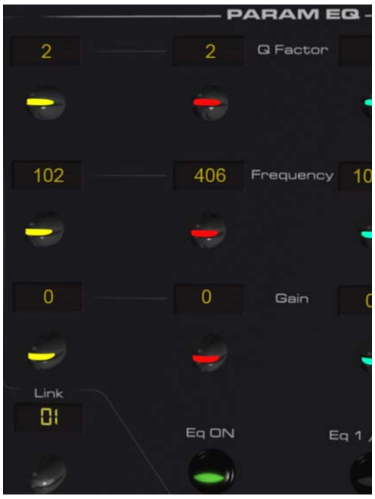
- **Band 1:** 102Hz, 0dB, 1 octave
- **Band 2**: 406Hz, 0dB, 1 octave
- **Band 3**: 1000Hz, 0dB, 1 octave
- **Band 4**: 6062Hz, 0dB, 1 octave

The range of values for every band is as follows:

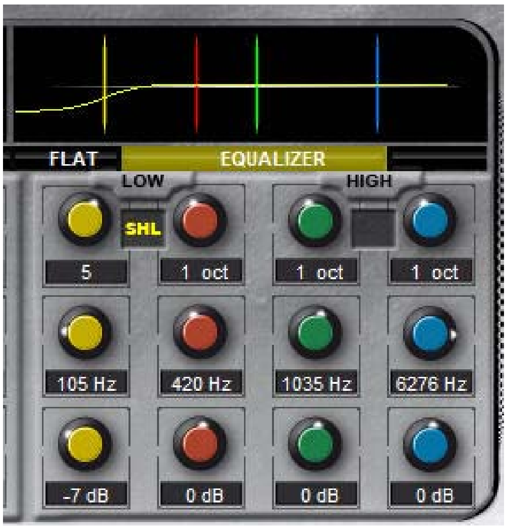
- **Frequency:** 27Hz to 19698Hz (96 values)
- **Gain**: ±15 dB (in steps of 1 dB) plus a Notch (at -50 dB)
- **Q Factor**: from 1/8 to 8 octaves (by the power of 2)

3. Reduce the **Gain** to minimum to activate the Notch filter:

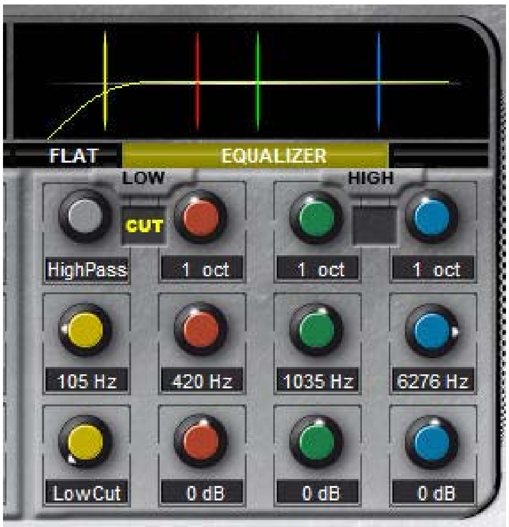




4. On Bands 1 and 4, press down on the **Q Factor** control to switch the band from parametric to shelving EQ:



5. Adjust the Gain and Frequency as before. The **Q Factor** control adjusts the slope of the shelf.
6. Having switched to shelving EQ (Bands 1 or 4), turn the **Gain** control to minimum (anticlockwise) for a high or low pass filter:



7. Turn the **Frequency** control to adjust the roll-off frequency of the filter.
8. Press down again on the **Q Factor** control to return the band to parametric EQ.

You can reset the Parametric EQ settings to flat using the **FLAT** button as described on Page 393.

Tip

PAN

The PAN control adjusts Left/Right panning onto a stereo or LRC mix bus.

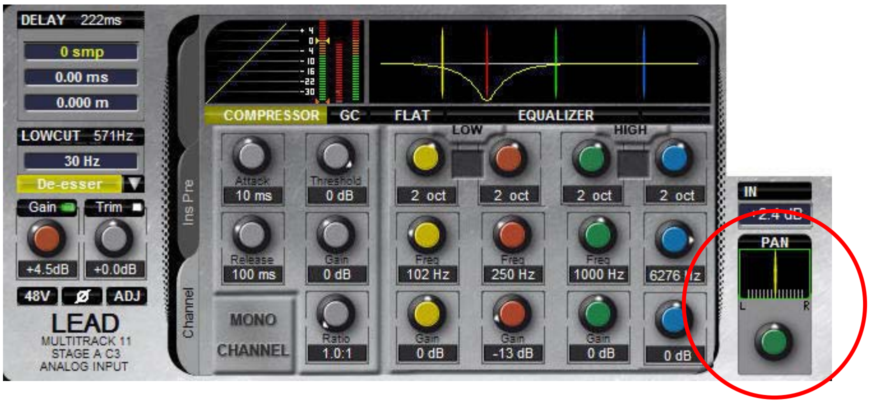
Normally it will adjust the main channel pan onto all stereo/LRC mix bus destinations – Auxes, Groups, Matrices and Masters. However, if an Aux or Group bus has been configured for Independent panning, then the control may be switched between:

- Main channel pan.
- Independent pan (see Page 164).

For now, let's assume that you are adjusting the main channel pan position:

1. Turn the control to adjust the Left/Right position.

The Pan position is indicated on the front panel and on the Main Mix display:



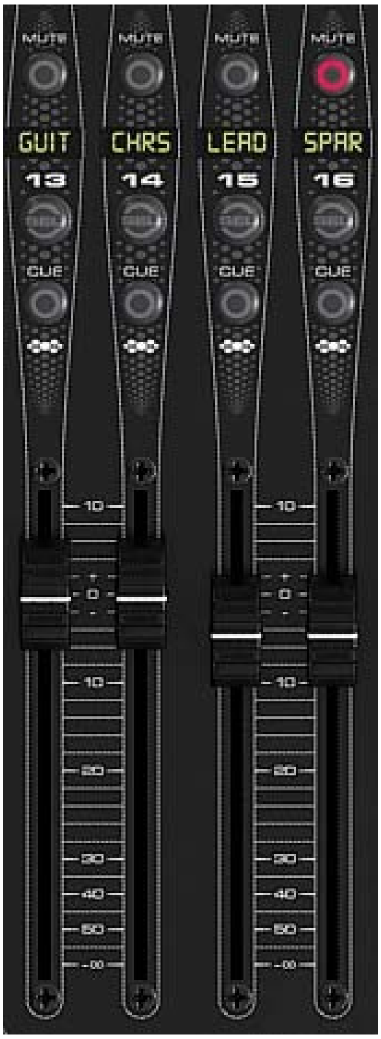
Panning may also be adjusted from the console's Fader strip pot, see Page 58.

Main Level, Mute and Cue

The remaining parameters for each input channel are controlled from its Fader Strip or Smart Panel controller. The principle parameters you can control are:

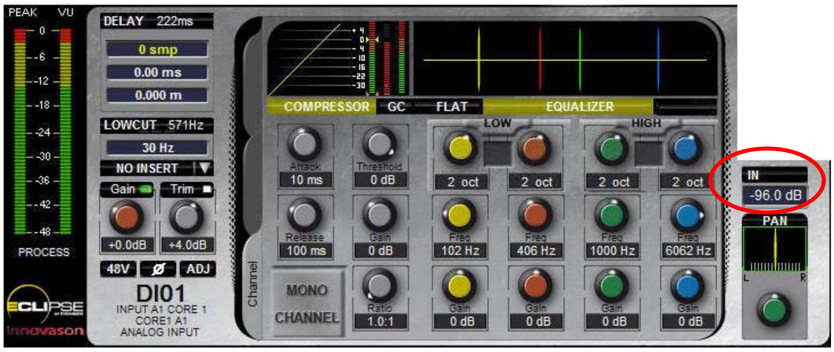
Main Level

The main channel level is adjusted by the Fader, or Smart Panel rotary controller, when an input channel is selected (**SEL** active).

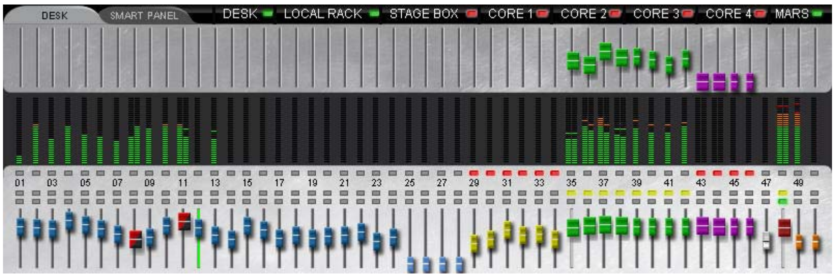


Note that if an Aux is selected, then all input faders switch to control the send level to the selected Aux.

The main level for the selected input channel is shown on the Main Mix display as follows:

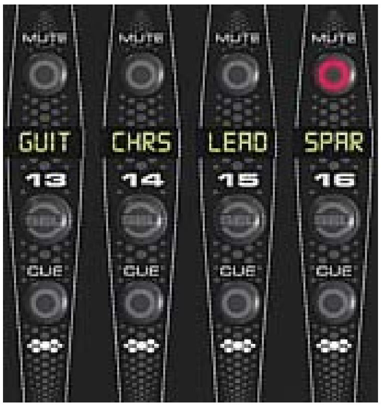


You can also get an overview of all main levels across the **DESK** or **SMART PANEL** from the lower row of faders:



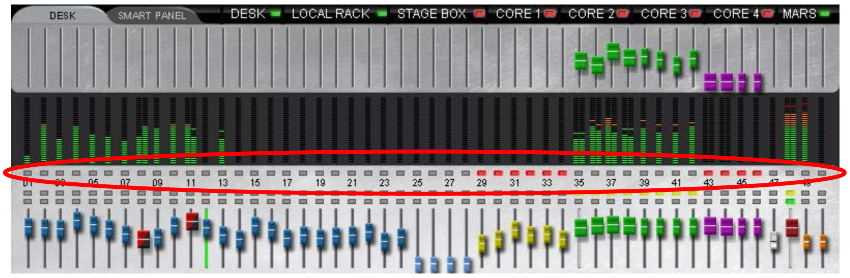
Mute

1. Press the **MUTE** button to mute the input channel.



*The **MUTE** button turns red when active.*

The status of **MUTE** buttons is also shown by the upper row of buttons (red) on the Main Mix display:



The **MUTE** function mutes all post-fader mix bus assignments; any pre-fader Aux sends are not affected by the channel **MUTE**.

Note

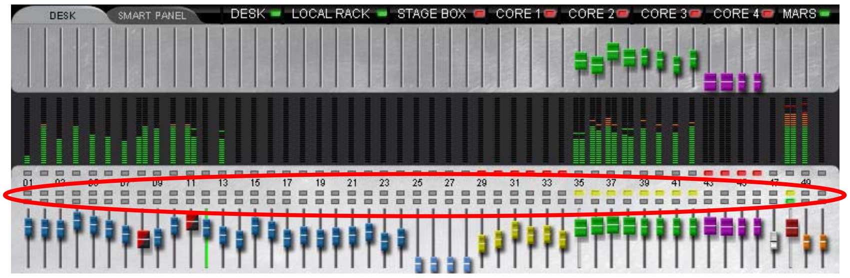
Note that if the **MUTE** button is flashing, this indicates that it is being controlled by a VCA or Smart Fader master.

Cue

1. Press the **CUE** button to route the input channel onto the console’s stereo Monitor bus.

*The **CUE** button turns green when active.*

The status of **CUE** buttons is also shown by the lower row of buttons (green) on the Main Mix display:



For input channels, the **CUE** button may be set to operate as PFL, AFL or SIP (Solo-in-Place). In addition, **CUE** can be additive or intercancel, and you can clear all **CUE**s. These options are set from the TB/MONITORING panel, see Page 206.

Aux Send Levels

Aux send levels are also adjusted by the console's Faders and Smart Panel rotary controllers.

Note

Note that send levels can be adjusted even if the channel is not routed to the aux. In addition, sends can be pre or post the main channel level, and sends to stereo auxes can follow the main channel pan or be independent. See Page 163.

There are two methods to adjust send levels:

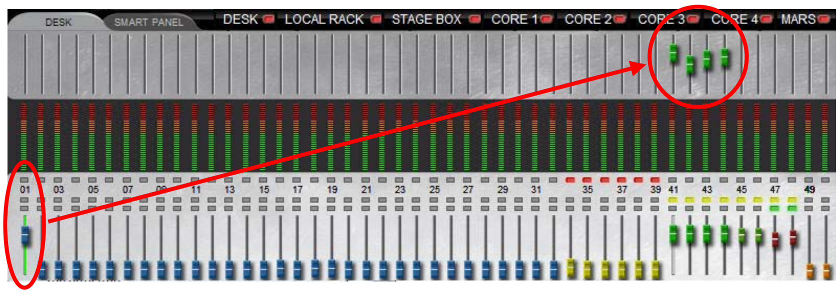
Forward Assign

1. Press **SEL** on the input channel.

*The **SEL** button and Label on the input should be flashing.*

2. Move an Aux Fader, or Smart Panel controller, to adjust the send level to the Aux.

The upper row of faders on the **DESK** or **SMART PANEL** Main Mix display provides confirmation of the send levels from the selected channel:



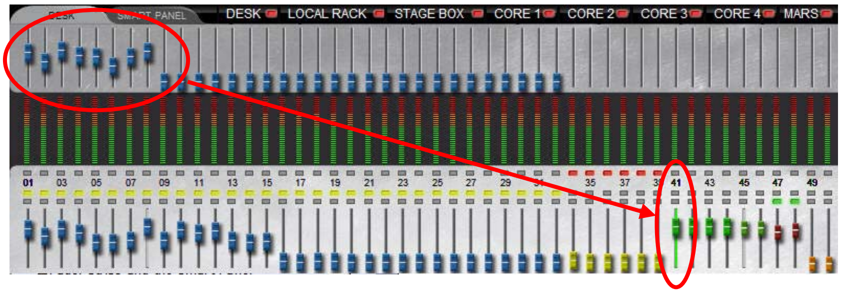
Reverse Assign

1. Press **SEL** on the Aux channel.

*The **SEL** button and Label on the Aux should be flashing.*

2. Move an input Fader, or Smart Panel controller, to adjust the send level to the Aux.

The upper row of faders on the **DESK** or **SMART PANEL** Main Mix display provides confirmation of the send levels to your selected Aux:



Note that this default fader mode (Dual) can be altered from the General Preferences window, see Page 428 for details.

Matrix Send Level

Each input channel can also be routed to a matrix with its own send level. According to the **General Preferences** options, they can receive inputs Pre or Post fader. If the Matrix is stereo, then both pre and post fader sends follow the main channel pan.

Operation is similar to adjusting aux send levels, but you must press and hold the **SEL** button on the selected input, or on the selected matrix in order to adjust matrix send levels from the faders. See Page 170 for full details.

Routing to Aux, Matrix, Group and Master busses is covered in detail on Page 159.

Smart Faders (SFADs)

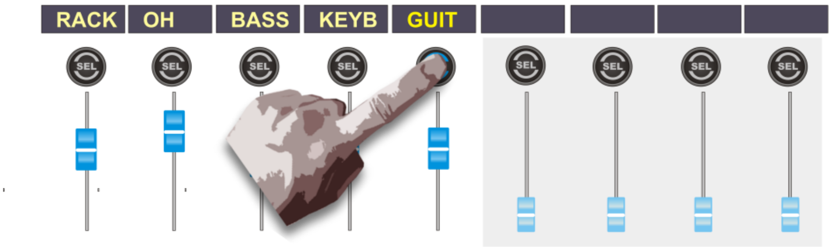
The Concept

So far we have described how any mono input may be controlled directly from a Fader strip or Smart Panel controller. However, to manage larger shows where the number of sources may exceed your physical faders, **Eclipse** provides a unique “layering” solution – **Smart Faders** (**SFADs**).

This solution works by using a Smart VCA (SVCA) to control a number of input slave channels. Each time you press the **SEL** button on the Smart VCA, its slaves are deployed to a pre-defined zone on the console (SZONE), thereby controlling multiple sets of “layered” inputs from very few physical faders.

The following examples illustrate the principles of Smart Faders.

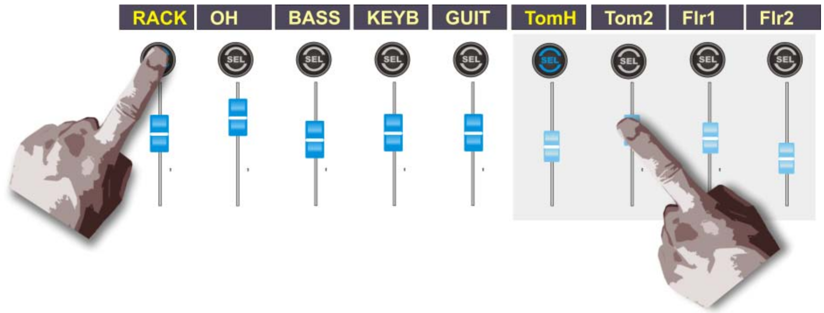
If a standard input is selected, the SZONE is unused:



Input faders : can control a single input or a complete layer of several inputs

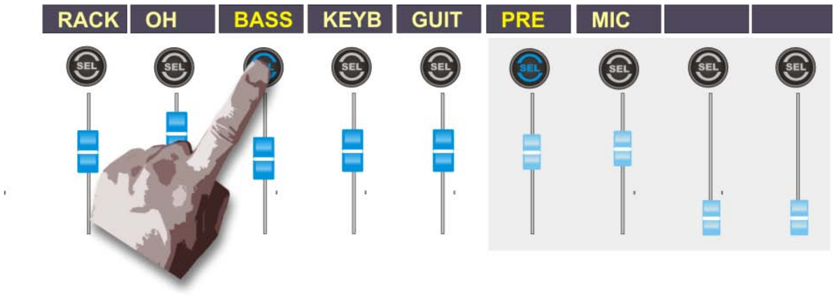
Smart Zone, area where the controlled inputs are deployed. Composed of SFAD (Smart Faders

Select a Smart VCA (e.g. **RACK**) and its slaves are deployed into the SZONE:

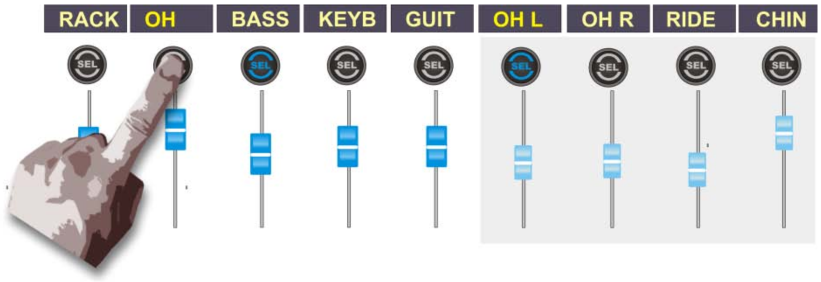


You can now control the individual levels of the four Racks drum channels (**TomH, Tom2, Flor1** and **2**).

Select a different Smart VCA (e.g. **BASS**) and its slaves appear in the SZONE replacing the Rack drum mics:

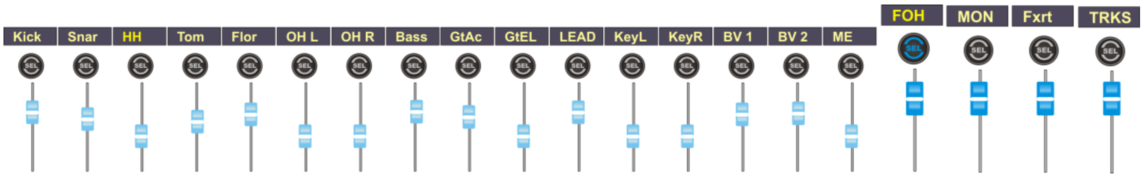


Different SVCAs can have different numbers of slaves; for example, this **OH** SVCA has four slaves:



A Smart VCA can control both mono and stereo input channel slaves. For example, you may configure a single SVCA for all your stereo effects returns.

Smart Faders can also be used to create a console with multiple layers:



Tip

Each individual microphone can be patched several times in different layers (split). Thus, you can create several consoles using the same inputs and benefit of a monitoring and FOH console on the same control surface. Note that each input benefits for each console of its own channel processing. No need to be lost in the pre/post processing sending offered by the traditional other consoles.

Configuration

To use Smart Faders, they must be configured on your surface. This is a two stage procedure:

- **Define the SZONE** – from the **Personal Console Builder**. For ease of operation, the Smart Fader zone must use contiguous Fader, or Smart Panel, strips. Only one zone is allowed but it can use any number of strips.
- **Patch the Smart Fader Inputs** – from the **PATCH INPUT** display. For each SVCA you can create the slave channels you need by patching sources across the SZONE. Slave channels can appear at any position within the SZONE.

In this section we will deal with the operation of Smart Faders. If you don't have any Smart Fader inputs on your console, then please see Page 223 for details on how to configure a Smart Fader zone (from the **Personal Console Builder**), and Page 242 to patch Smart Fader inputs (from the **PATCH INPUT** grid).

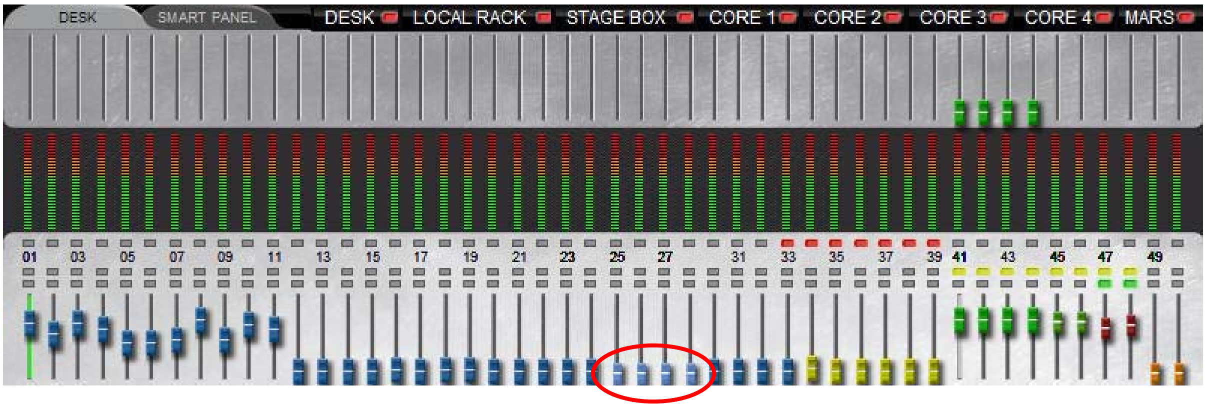
Identifying Smart Faders

You can interrogate whether your console has a Smart Fader zone (SZONE) from the ID colours used on the Fader Strips, Smart Panel and/or Main Mix display.

Note

Note that for ease of operation, the Smart Fader zone must use contiguous Fader, or Smart Panel, strips and only one zone is allowed.

The Smart Fader slaves (SZONE) are shown with a light blue ID – in our example, Faders 25 to 28:



Working with Smart Faders

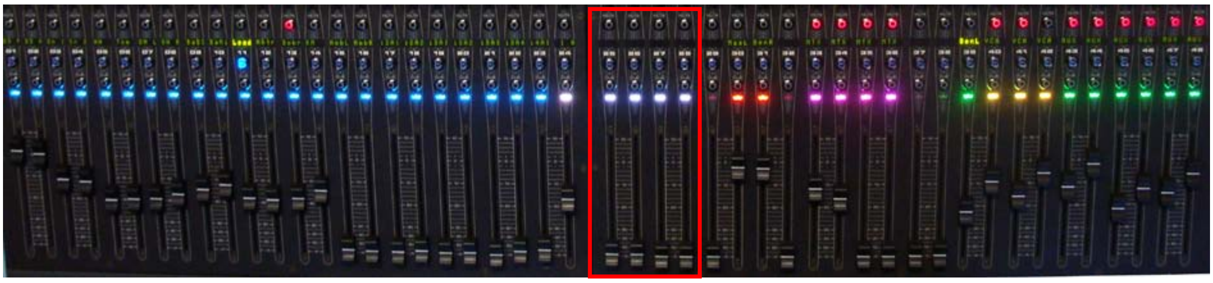
Let's take an example with a 4-fader SZONE. In our configuration, a number of inputs have been patched to the surface, some as standard input channels and others as Smart VCAs.

1. Move any of the Smart VCA or standard input faders to control the mix.

Smart VCAs behave very much like a normal VCA; as you move the fader you are adjusting the overall level of any slaves.

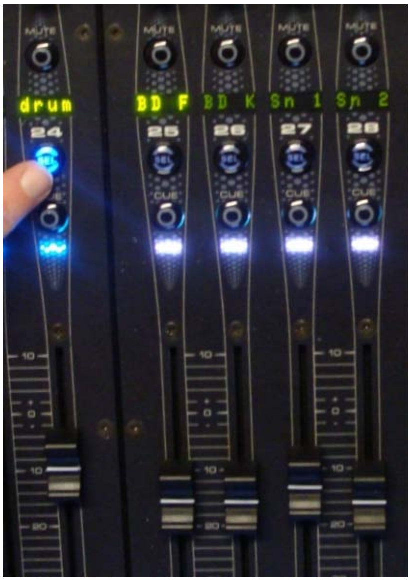
2. Select a standard input (press **SEL**) to assign it to the Selected Channel or view its routing.

When a standard input is selected, the SZONE is unused; you will see blank Labels on the Fader strips and the faders close:

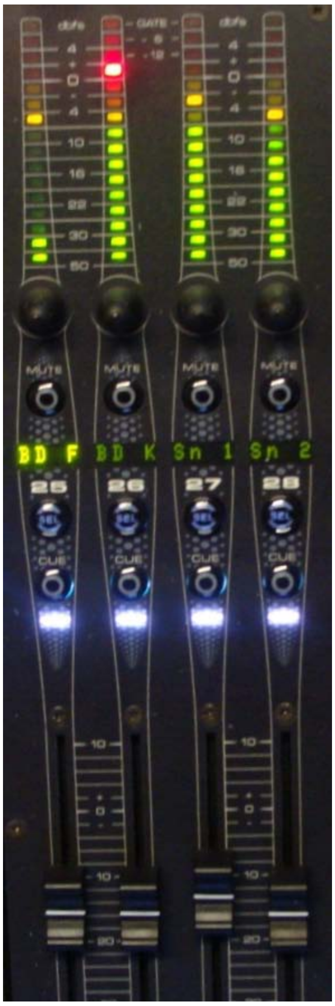


3. Now press **SEL** on a Smart VCA channel – e.g. **drum**.

This SVCA has four slaves which are deployed into the Smart Fader Zone:

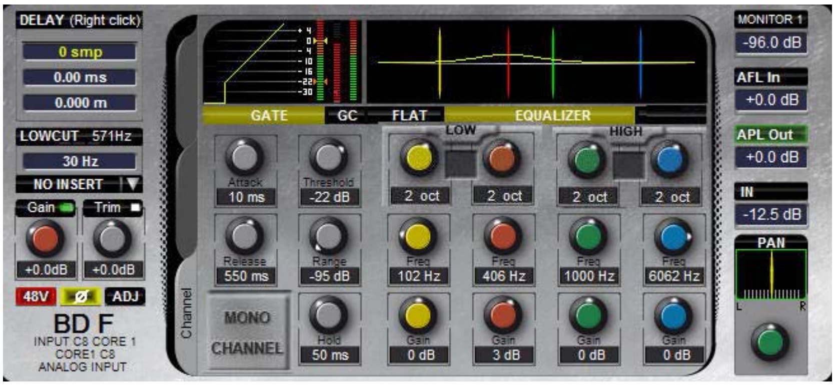


Slave Channel Parameters



You can now control the input channels from the SZONE just as if they were normal input channels:

1. The VU meter shows signal level for the input channel.
2. Turn the rotary control to adjust Gain, Pan or Trim.
3. Press **MUTE** to mute the channel.
4. Move the fader to adjust the level.
5. Press **CUE** to cue the channel.
6. Press the **SEL** button to assign the input channel to the Selected Channel and adjust EQ, Dynamics, etc:



DELAY (Right click)
0 smp
0.00 ms
0.000 m
LOWCUT 571Hz
30 Hz
NO INSERT
Gain +0.0dB
Trim +0.0dB
BD F
INPUT C8 CORE 1
CORE1 C8
ANALOG INPUT
Attack 10 ms
Threshold -22 dB
Release 550 ms
Range -95 dB
Hold 50 ms
2 oct
2 oct
2 oct
2 oct
Freq 102 Hz
Freq 406 Hz
Freq 1000 Hz
Freq 6062 Hz
Gain 0 dB
Gain 3 dB
Gain 0 dB
Gain 0 dB
MONITOR 1 -96.0 dB
AFL In +0.0 dB
APL Out +0.0 dB
IN -12.5 dB

If the slave channel is stereo, then it will behave as a normal stereo input channel. See Page 184 for details.

Master SVCA Parameters

Now move back to your Smart VCA master channel (e.g. **drum**) and note that you have *master* control over the following parameters:

1. Move the SVCA fader to adjust the overall level of the Smart Fader slaves.

Just like normal VCAs, Smart VCAs use non-moving faders so you will not see the slave faders move in the SZONE.

2. Press **MUTE** on the SVCA Fader strip to mute or unmute the slave channels.

Note that the SVCA **MUTE** will not override any existing slave channel **MUTE**s. This is indicated on the slave channels as follows:

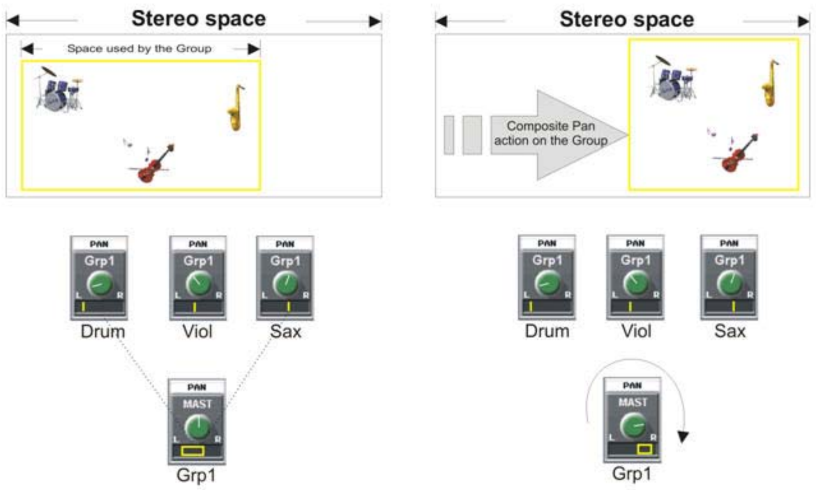
- **MUTE** flashing – the channel is muted *only* by the VCA. When you unmute the VCA, the channel **MUTE** cancels.
- **MUTE** steady state - the channel **MUTE** is active; it will not be affected by the VCA **MUTE**. To unmute the channel you must unmute both the VCA and the slave.

3. Press **CUE** on the SVCA Fader strip to activate **CUE** on all the slave channels.

Note that you can deselect individual **CUE** buttons from the SZONE slaves if you wish. If you do this, then you will need to deselect all slave **CUE**s before you can re-activate them from the SVCA master.

4. Turn the PAN control (either on the Fader strip pot or the Selected Channel) and you can adjust the composite pan position of the Smart Fader slaves.

For example, let’s say you have created a Smart Fader VCA named **Grp1** which is controlling three slave channels: Drum, Viol and Sax. The slave channels are panned as shown below:

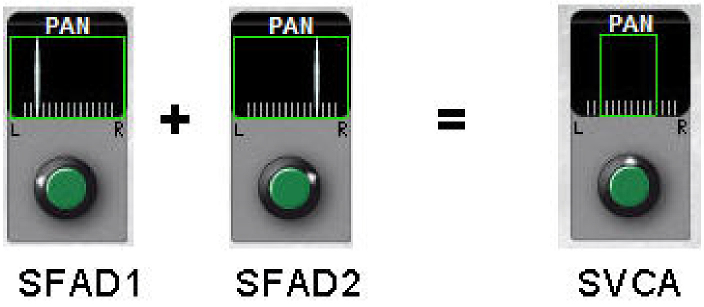


- When the SVCA (**Grp1**) is panned centre, the stereo image of the slave channels remains intact.
- Turn the PAN control on the SVCA to the right, and the stereo image can be offset to the right.

Note

Note that if you turn the SVCA PAN to full right (or full left) then you will destroy the stereo imaging of the slave channels. So reset the SVCA PAN to centre to restore your original slave pan positions.

You can see the affect of any pan offsets on the Main Mix display. The following diagram shows the PAN position for two Smart Fader slaves (SFADs), and the resultant PAN display if you select the SVCA master:

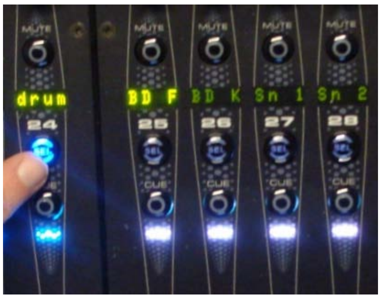


Controlling Slaves from the SVCA

Tip

Notice that even though the SVCA is a VCA strip, it has processing parameters available from the Selected Channel controls (EQ, DYNAMIC, etc.) This is because the SVCA provides automatic “remote” control over one of its slaves.

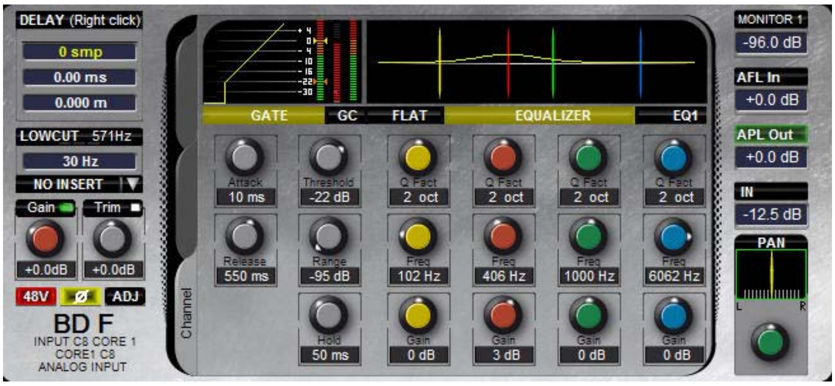
You can see how this works by using the console surface in conjunction with the Main Mix display:



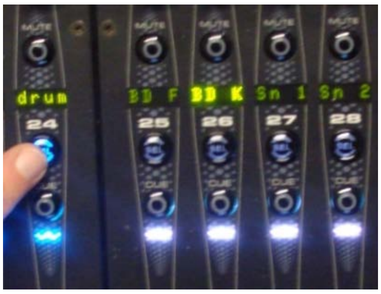
1. Press **SEL** on the SVCA channel – for example, **drum**.

The SVCA slaves are deployed into the Smart Fader Zone:

Notice how one of the SZONE Labels is fully lit – in our example, **BD F**. This is the active input channel, as shown on the Main Mix display:

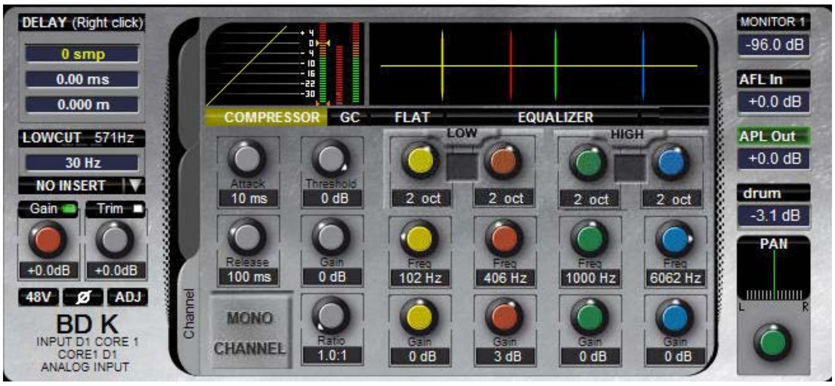


2. So you can reach up to Selected Channel controls and adjust the EQ, Dynamics, etc. of this input.



3. Now press **SEL** on the SVCA channel again.

The next SZONE slave is assigned to the Selected Channel; its Label becomes fully lit and it is displayed on the Main Mix:



It is now the **BD K** input channel which is active and will be controlled from the Selected Channel panels.

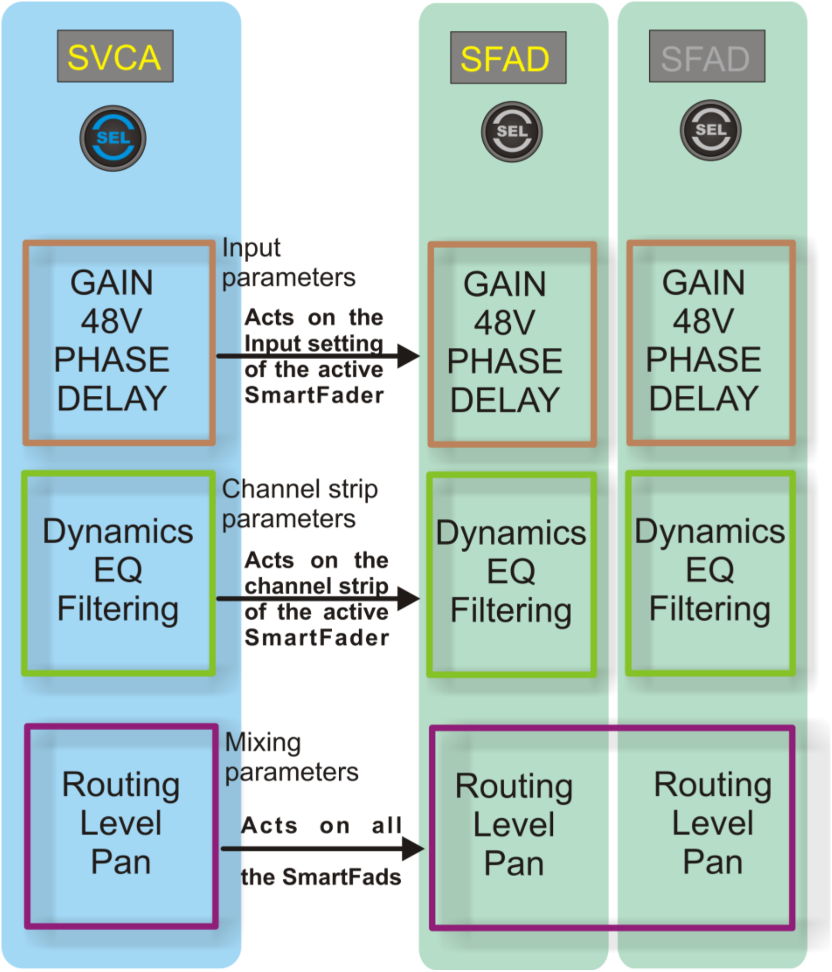
4. Keep pressing the **SEL** button on the SVCA channel and you will see that it cycles through all the input slaves.

This feature really comes into its own when you are working quickly on a console with lots of Smart Fader VCAs.

Each time you press **SEL** on a SVCA, the last active input is remembered and you may adjust its EQ, DYNAMICS, etc. from the Selected Channel controls.

So, for example, you can move between the EQ on a lead guitar (controlled by a Guitars Smart VCA), to the EQ on the Bass DI (controlled by a Bass Smart VCA) simply by pressing **SEL** on the Guitars or Bass SVCA channels.

The diagram below summarises the control from the Smart Fader VCA channel (**SVCA**):



Smart Fader Metering

The VU meter on the Smart VCA displays the highest signal level of any slave channel. For example, if you have a Smart VCA controlling your drum mic input channels, whichever input is loudest will be displayed on the Smart VCA meter.

Smart Fader Tips

When Smart Faders are configured, they default so that the Smart Fader slaves in the SZONE are at – infinity and **MUTE** is active.

Tip

You can change this by setting a **General Preferences** option so that when a Smart Fader input is patched its level is automatically set to 0dB, see Page 428.

Regardless of this level preference, it is worth checking all of the following:

1. Press **SEL** on the first SVCA and set its fader level to 0dB with **MUTE** off.
2. Press and hold the **SEL** button on the SVCA and select **SEL** buttons on each bus you wish to route to.

You should also configure any pre-fader or Independent sends at this time. See Page 164 for details.

3. Now adjust each of the Smart Fader slaves to the levels you require and deselect any slave **MUTE** buttons.
4. Pan each slave and adjust its initial EQ, Dynamics, etc.
5. Now repeat these steps for each SVCA on the console.

This will provide a good starting point for your mix.

Mix Busses

The console is equipped with a DSP engine which enables you to mix up to 104 input channels simultaneously onto 48 mix busses.

Any mix bus (Aux, Group, Master or Matrix) may be mono, stereo or stereo LRC. Note that a stereo bus uses two DSP resources; a LRC bus uses three DSP resources.

In addition to the 48 configurable mix busses, a stereo bus is included for monitoring.

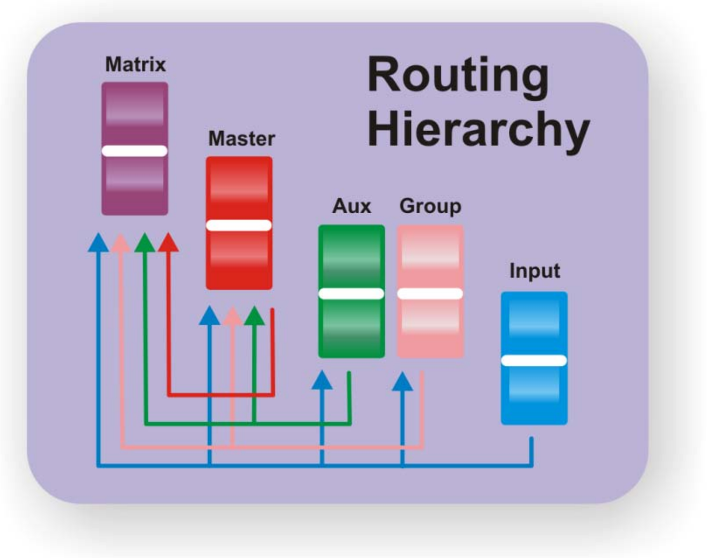
Note

Note that up to 32 mix busses may be patched to the Muxipaire interfaces (at the rear of the console or in a Muxipaire Stagebox). There is no limit on mix bus patching to a DioCore (Ethersound interface). Please see the “Eclipse Technical Manual” for further details.

Signal Flow

Each of the 48 *mix busses* may be configured as an Aux, Group, Master or Matrix output. The differences between the bus types are:

- **Routing Hierarchy** - channels are routed to busses according to the following hierarchy:

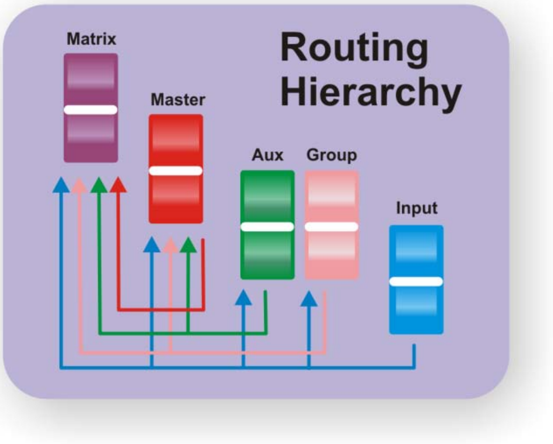


    - Input channels may be routed to any mix bus
    - Auxes or Groups may be routed to a Master or Matrix
    - Masters may be routed to a Matrix

- **Send Levels** - routing to Groups and Masters is a direct one-to-one assignment. Auxes and Matrices have a separate send level.

Bus Routing

Once you have input and output (mix bus) channels on the console surface, you can route any input to any output, or route bus to bus providing you obey the rules of the bus hierarchy:



The console uses a reciprocal routing system which uses the **SEL** buttons on the surface to display and modify routing assignments. There are two different approaches to making a route:

- **Forward Assign** – this is the conventional method for routing a channel onto a bus, and allows you to route a single channel onto multiple busses quickly. For example, when you want to assign an input channel to a Group, Aux and Master.
- **Reverse Assign** – this method allows you to interrogate and modify the assignments onto an individual bus. This is great when you wish to route a range of channels to a single bus output. For example, to adjust the routing and send levels going to an Aux output.

Note

Note that both bus routing and any send levels are set from the console's **SEL** buttons and Faders (or Smart Panel controllers) in one operation. This means that the console Faders (or Smart Panel controllers) can be operating in one of two modes:

- Controlling the **main level** of the input channel or mix bus master.
- Controlling the **send level** from the input channel or mix bus master to an Aux or Matrix send.

Please refer to Page 74 for an example of forward and reverse bus assign.

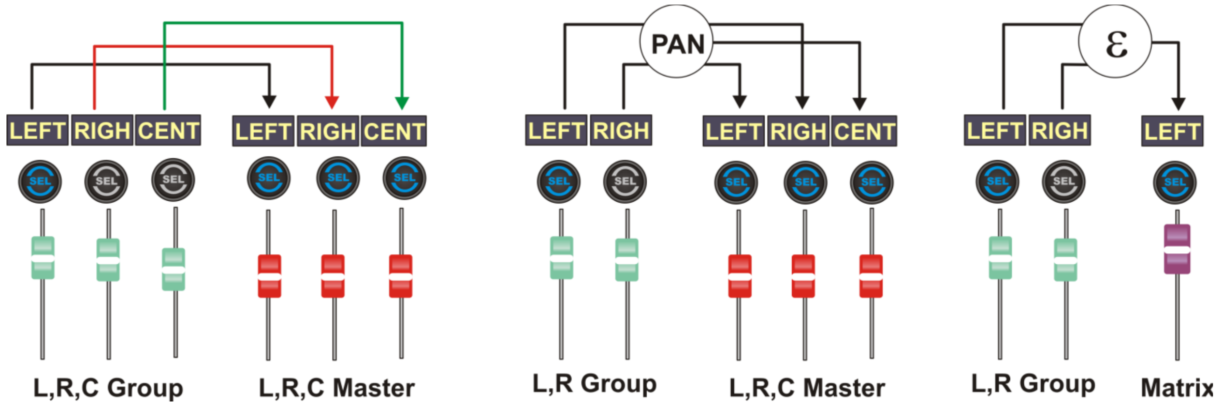
Note that you can set a **General Preferences** option so that when an input is routed to an Aux, the Aux send is automatically set to 0dB, see Page 428.

Panning to Stereo Busses

When a route is made to a stereo mix bus, the channel is assigned to *all* component busses – Left, Right and Centre (if applicable) – and the main channel pan position is applied.

For Auxes and Groups, you can set the mix bus send to be independent of the main channel pan. See Page 126. This allows you to pan to Auxes and Groups with separate pan positions for each mix bus.

When you route stereo or LRC busses to each other, then component channels are routed one-to-one, panning is applied (from Auxes and Groups only) or summed, as shown below:



Note that panning can only be applied on Aux or Group output channels. You cannot pan a Matrix or Master.

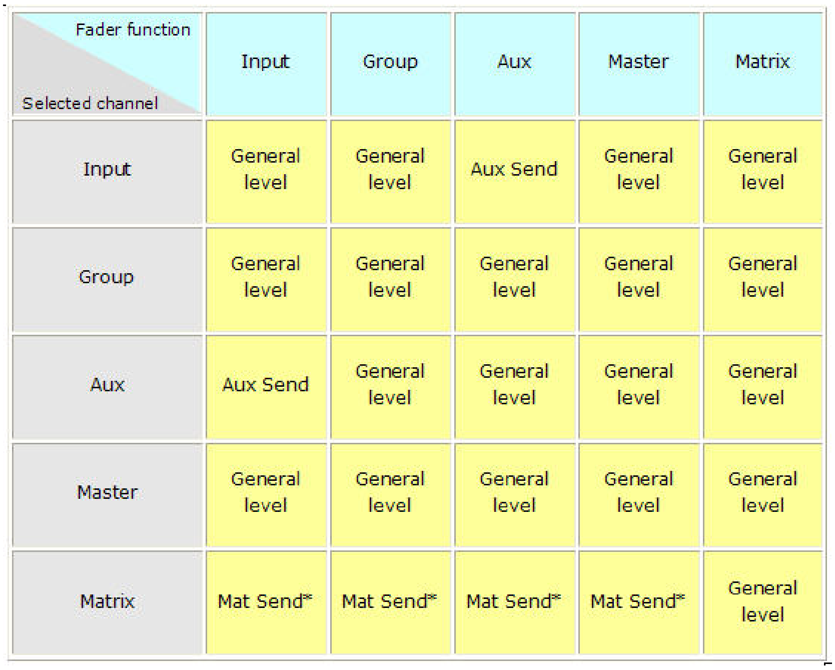
Note

Fader Modes

Depending on which type of channel is selected, the console Faders (or Smart Panel controllers) can be operating in one of two modes:

- Controlling the **main level** of the input channel or mix bus master.
- Controlling the **send level** from the input channel or mix bus master to an Aux or Matrix send.

The following table summarises the Fader function (or Smart Panel rotary control function) for each type of selected channel:



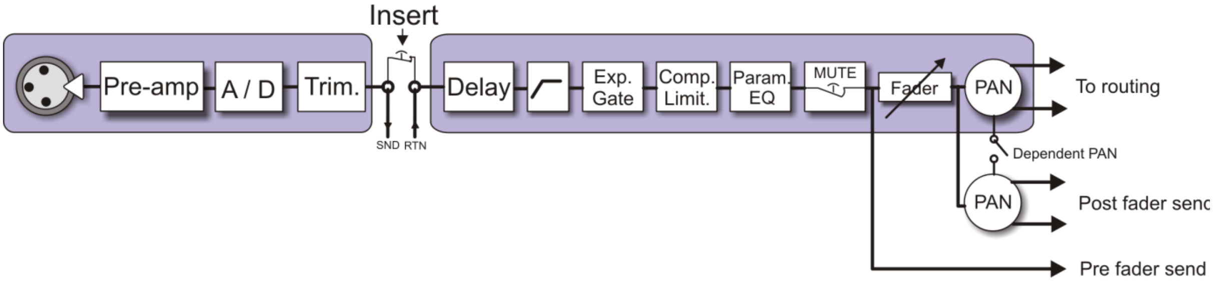
Fader function Selected channel	Input	Group	Aux	Master	Matrix
Input	General level	General level	Aux Send	General level	General level
Group	General level	General level	General level	General level	General level
Aux	Aux Send	General level	General level	General level	General level
Master	General level	General level	General level	General level	General level
Matrix	Mat Send*	Mat Send*	Mat Send*	Mat Send*	General level

Note that the Matrix Sends may operate in Static assign or Active assign as described on Page 170.

Note that this table applies to the Dual fader mode. This mode can be altered from the from the General Preferences window, see Page 428.

Mix Bus Sends

The following diagram shows the signal flow through an input channel and the different sends available:



Routing to Groups

When you route to a Group, bus assignments are made directly; there is no separate send level to assign. Assignments are always post-fader. In addition, when routing to a stereo or LRC bus, you can choose whether assignments are:

- Post-fader, following the channel Pan
- Post-fader and independent of channel Pan

Routing to Masters

Master bus assignments are also made directly; there is no separate send level. All assignments are post-fader and always follow the main channel Pan position.

Aux Sends

When you route to an Aux, you can turn the bus assignment on or off and set the Aux send level. Aux sends can be:

- Pre-fader.
- Post-fader, following the channel Pan
- Post-fader and independent of channel Pan

Matrix Sends

Like Auxes, Matrix outputs have separate send levels.

Matrix send points are determined globally, and can be pre-fader or post-fader from input channels and post-fader only from output channels (other mix busses).

Assignments to a stereo Matrix always follow the main channel Pan.

The operation of Matrix Sends is a little different to Aux Sends. For details see Page 170.

The PAN Display

The **PAN** display provides an overview of bus assignments to Auxes, Groups and Masters. The display shows where a channel is assigned, and whether the assignment is pre-fader, post-fader or independent of channel panning. Matrix assignments are not included as they cannot be switched individually between pre-fader and post-fader, and do not support independent panning.

The display works slightly differently depending on whether you have an input channel or output channel selected when you open the display; let's look at an example of each:

Interrogating Assignments from an Input Channel

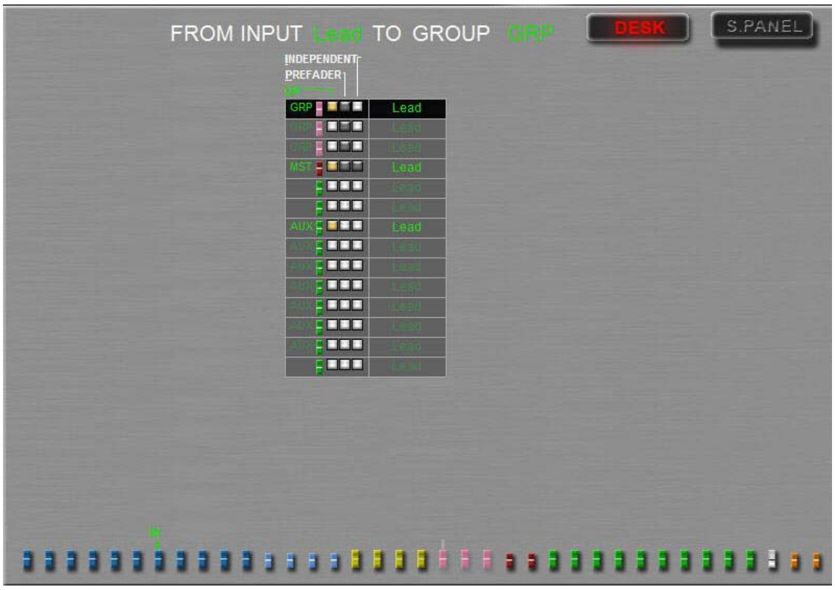
1. Press **SEL** on an input channel.

*The **SEL** button and Label on the input should be flashing.*

	Pre/Pan **(UTILITIES)**
	"GRID -> Pan"
	[F11]

2. Open the **PAN** display by pressing the **Pre/Pan** button on the UTILITIES panel.

*The display shows assignments from the selected input channel (e.g. **Lead**) to every bus controlled from the **DESK** (Faders):*

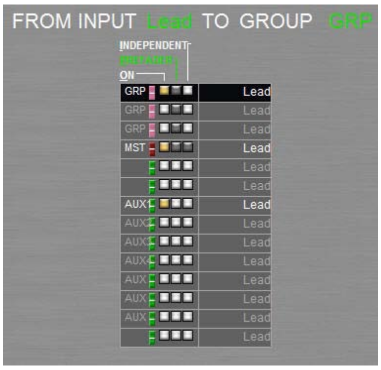


Above we have three Groups, a stereo Master and 10 Auxes available, and our input is assigned (**ON**) to a Group, the Master and an Aux. No other options are selected (**PREFADER** and **INDEPENDENT** are off) so this means that the send is Post-fader and will follow the channel Pan position.

Notice how the faders within the **PAN** display are colour coded to help you separate Groups from Auxes from Masters.

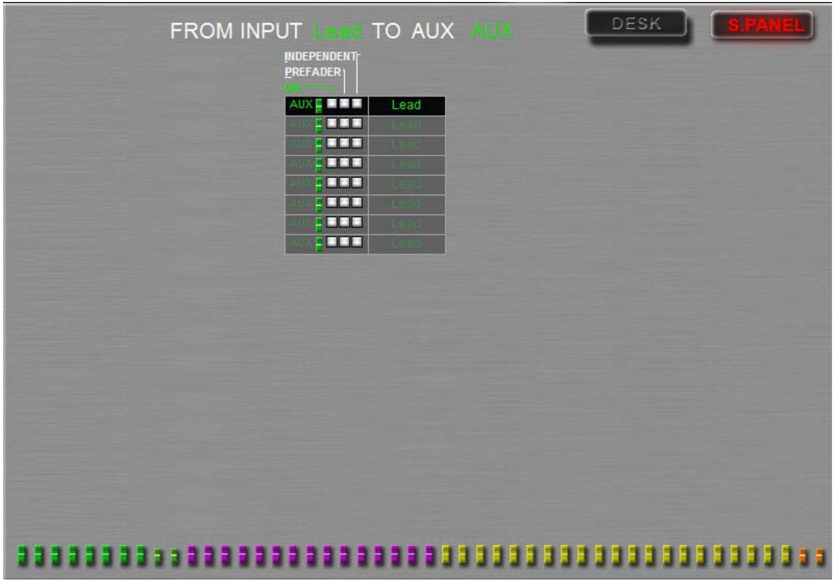
Also notice that the bus assignment options vary depending on the type of bus – for example, the Master can *only* be assigned **ON**/off (PREFADER and INDEPENDENT are not available).

The **PAN** display also shows the pan position for each send. This is represented by the LRC position of the channel Label (e.g. **Lead**). In the previous example, all sends were panned centre, but opposite our channel has been panned to the Right. As our sends are dependent on the main channel pan, they follow the channel pan to the Right.



3. Now select the **S. PANEL** tab on the Main Mix display.

The display updates to show assignments from the selected input channel to busses controlled from the Smart Panel:



In our example, there are 8 available Auxes and our input is not assigned to any of them (**ON** is off).

4. Return to the **DESK** faders, and press **SEL** on a different input channel.

The display updates to show assignments from the input.

5. Now exit the **PAN** display by deselecting the **Pre/Pan** button or pressing **CANCEL** or [**ESC**].

Interrogating Assignments to a Mix Bus

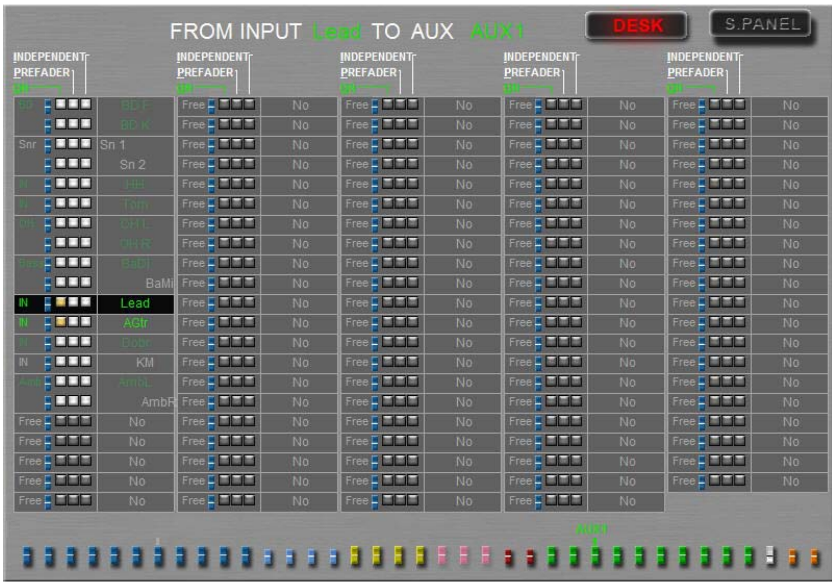
1. Press **SEL** on an output channel – e.g. an Aux.

The ***SEL*** *button and Label on the Aux should be flashing.*

	Pre/Pan **(UTILITIES)**
	"GRID -> Pan"
	[F11]

2. Open the **PAN** display by pressing the **Pre/Pan** button on the UTILITIES panel.

This time the display shows bus assignments and panning to the selected Aux (e.g. ***AUX 1****) from all 104 input channels:*



Note that it doesn't matter if the input channels are assigned to the Fader strips or Smart Panel; you will see *all* input channels providing a complete overview of assignments.

In the example above we are only using the first few input channels; the **Lead** and **AGtr** channels are routed to the selected Aux (**ON** = post-fader, following channel pan).

Notice that some of the inputs are Smart Faders; for each Smart Fader VCA, you can see the bus assignments and pan positions from each individual slave channel.

3. Press **SEL** on a different output channel.

The display updates to show assignments to the selected mix bus.

Creating Pre, Post or Independent Sends

Aux sends can be pre-fader, post-fader or independent (post-fader *and* independent of channel pan). Group sends can be post-fader or independent (post-fader *and* independent of channel pan).

The send status is set by changing the **PREFADER** or **INDEPENDENT** boxes from the **PAN** display.

Note that you can also switch Aux sends from dependent to independent pan using the Fader strip's rotary control. See Page 126 for details on this method.

Note

Let's take an example of routing input channels to an Aux:

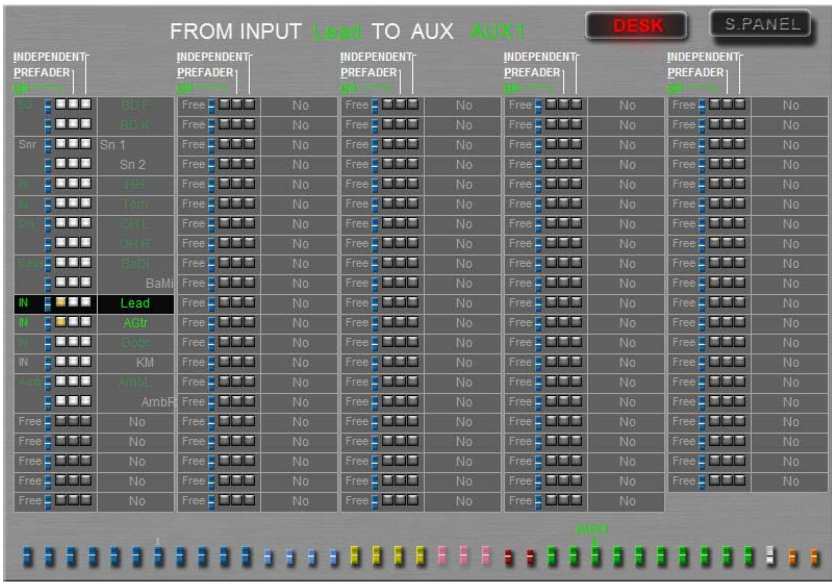
1. Press **SEL** on the output channel – an Aux.

*The **SEL** button and Label on the Aux should be flashing.*

2. Open the **PAN** display by pressing the **Pre/Pan** button.

*The display shows bus assignments and panning to the selected Aux (e.g. **AUX 1**) from all 104 input channels:*

	Pre/Pan **(UTILITIES)**
	"GRID -> Pan"
	[F11]

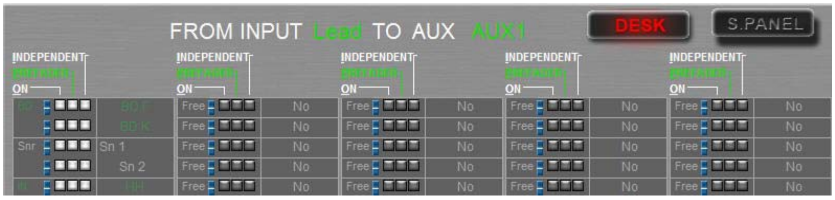


3. Now using the console keyboard choose your assignment mode:

- Press [**O**] to select **ON**.
- Press [**P**] to select **PREFADER**.
- Press [**I**] to select **INDEPENDENT**.

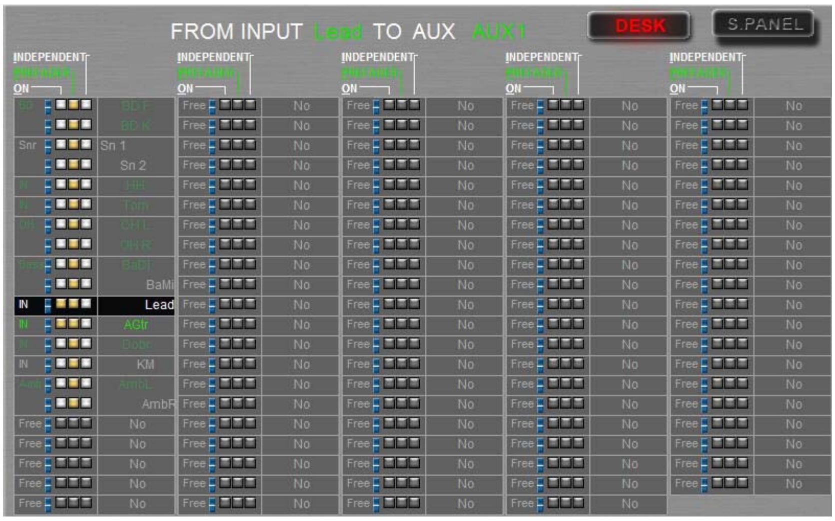
Let’s assume you pressed [**P**] for PREFADER.

PREFADER is highlighted in green:



4. Now press and hold the **SEL** button on the Aux channel and press the **SEL** buttons on the input channels you wish to assign pre-fader.

*Each time you press a **SEL** button, you will see the **PREFADER** box turn yellow on the display:*



Tip

You can use the multiple assign short cut described on Page 78 to select a range of channels.

You have now prepared your aux assignments to be pre-fader, and any assignments which are **ON** are already pre-fader – in our example, **Lead** and **AGtr**.

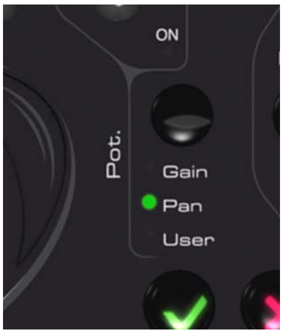
5. You can turn on other Aux sends by changing the assignment mode to **ON**/off – press [**O**] on the keyboard – and repeating step 4.
6. You can make sends Independent by changing to **INDEPENDENT** – press [**I**] on the keyboard – and repeating step 4.
7. When you have finished deselect the **Pre/Pan** button or press **CANCEL** or [**ESC**] to exit the **PAN** display.

The console’s **SEL** buttons now return to showing and changing the status of On/Off bus assignments.

Controlling Independent Panning

Having made a send independent of the main channel pan, you can adjust its pan position as follows:

1. Switch the Fader strip pots to Pan mode using the **Pot.** selector button.



The green LED next to Pan should be illuminated.

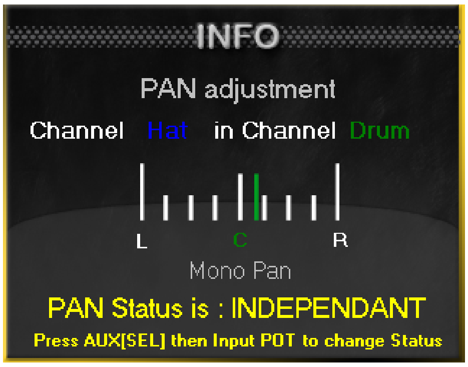
2. Press **SEL** on your stereo Aux channel so that the input faders feeding the Aux switch into “Aux send” mode:

*The steady state **SEL** buttons indicate bus assignments to the selected Aux - in our example, a range of input channels are assigned to the Aux:*

If you move your input faders, you should be adjusting the Aux send levels.

3. Now turn the pot on one of the input faders feeding the Aux to adjust the independent pan position:

Panning from the input to the selected Aux is adjusted. The main channel pan and other stereo aux sends are unaffected.



INFO

PAN adjustment

Channel Hat in Channel Drum

Mono Pan

PAN Status is : INDEPENDANT

Press AUX[SEL] then Input POT to change Status

Note that you change between independent and dependent panning by pressing down on the pot.

The INFO window updates accordingly.

Tip

You can set separate pan positions to multiple bus sends as long as each one is configured to be Independent of the main channel pan.

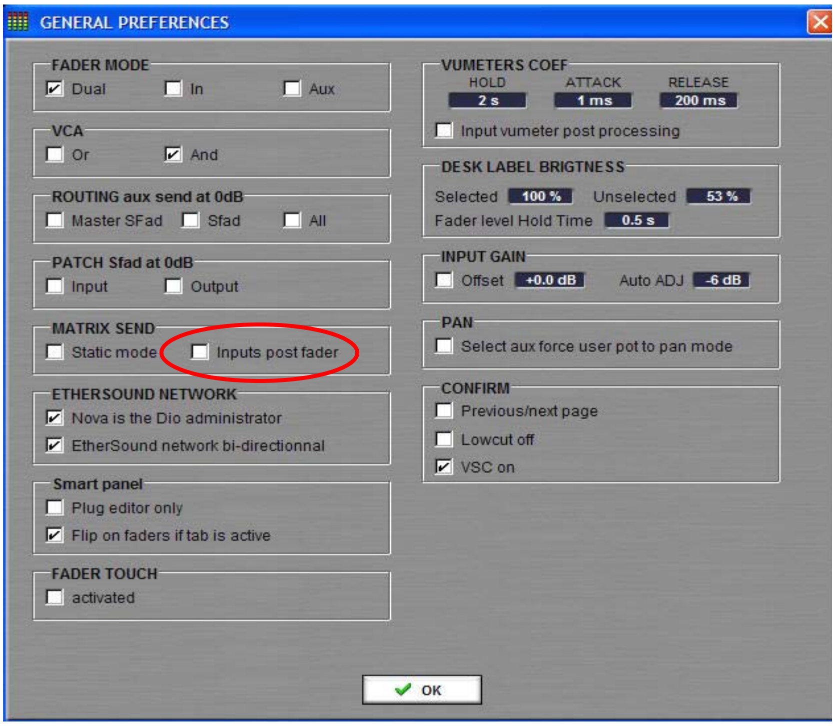
Matrix Sends

A Matrix can be routed from any input, Group, Aux or Master using either Forward or Reverse Bus Assign.

Matrix sends are *always* post-fader from output channels (other mix busses), but can be switched pre-fader or post-fader for all input channels.

This option is set globally and is selected from the **General Preferences** window:

ECLIPSE	**PREF** **(USER DEFINED PANEL)**
🖱	**“UTIL -> General Preferences”**
⌨	**n/a**



GENERAL PREFERENCES

FADER MODE
☑ Dual ☐ In ☐ Aux

VCA
☐ Or ☑ And

ROUTING aux send at 0dB
☐ Master SFad ☐ Sfad ☐ All

PATCH Sfad at 0dB
☐ Input ☐ Output

MATRIX SEND
☐ Static mode ☐ Inputs post fader

ETHERSOUND NETWORK
☑ Nova is the Dio administrator
☑ EtherSound network bi-directionnal

Smart panel
☐ Plug editor only
☑ Flip on faders if tab is active

FADER TOUCH
☐ activated

VUMETERS COEF
HOLD 2 s ATTACK 1 ms RELEASE 200 ms
☐ Input vumeter post processing

DESK LABEL BRIGTNESS
Selected 100 % Unselected 53 %
Fader level Hold Time 0.5 s

INPUT GAIN
☐ Offset +0.0 dB Auto ADJ -6 dB

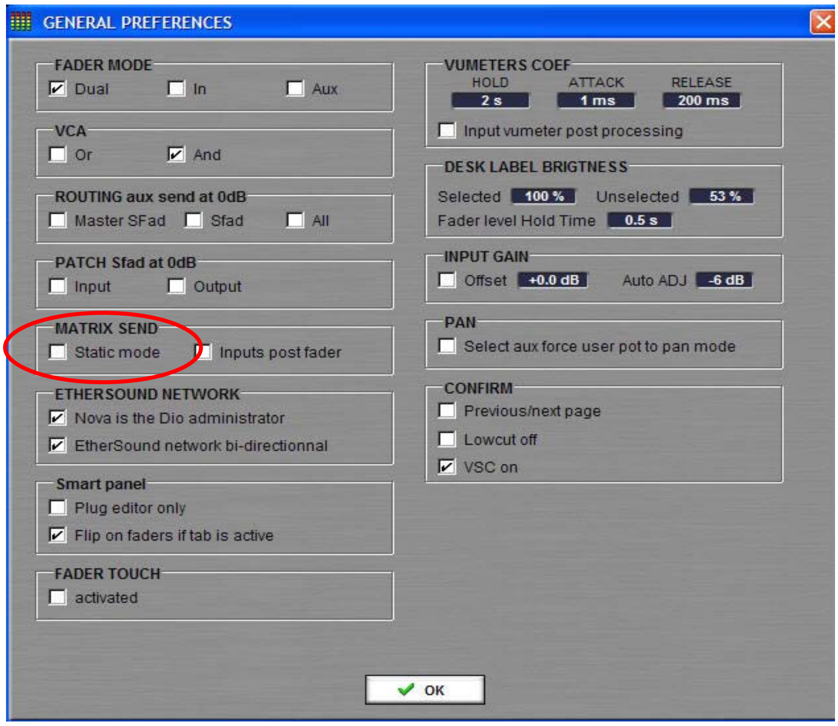
PAN
☐ Select aux force user pot to pan mode

CONFIRM
☐ Previous/next page
☐ Lowcut off
☑ VSC on

Adjusting Matrix Send Levels

Like Auxes, Matrix assignments have a separate send level.

From the **General Preferences** window, you can determine how these send levels may be adjusted:



FADER MODE
☑ Dual ☐ In ☐ Aux

VCA
☐ Or ☑ And

ROUTING aux send at 0dB
☐ Master SFad ☐ Sfad ☐ All

PATCH Sfad at 0dB
☐ Input ☐ Output

MATRIX SEND
☐ Static mode ☐ Inputs post fader

ETHERSOUND NETWORK
☑ Nova is the Dio administrator
☑ EtherSound network bi-directionnal

Smart panel
☐ Plug editor only
☑ Flip on faders if tab is active

FADER TOUCH
☐ activated

VUMETERS COEF
HOLD 2 s ATTACK 1 ms RELEASE 200 ms
☐ Input vumeter post processing

DESK LABEL BRIGTNESS
Selected 100 % Unselected 53 %
Fader level Hold Time 0.5 s

INPUT GAIN
☐ Offset +0.0 dB Auto ADJ -6 dB

PAN
☐ Select aux force user pot to pan mode

CONFIRM
☐ Previous/next page
☐ Lowcut off
☑ VSC on

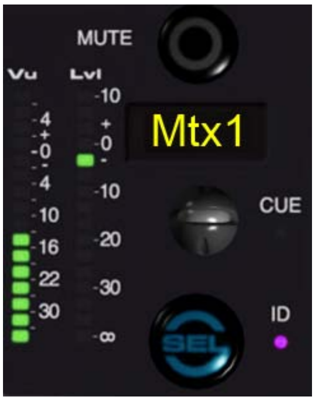
- **Static mode** off – the channel send level can only be adjusted when you press and hold the **SEL** button on the Matrix, see below for further details.
- **Static mode** on – this mode works in the same way as Aux sends. When you select a Matrix, all input, Group, Aux and Master faders become the send levels to the matrix.

Warning

If you work with **Static Mode** on, then you *must* remember that if a Matrix **SEL** button is pressed, your Master (and input, Aux, Group) faders are NOT adjusting their Master levels, but are adjusting the Matrix send level.

⚠ Warning

For this reason, we recommend **Static mode** off which works as follows:



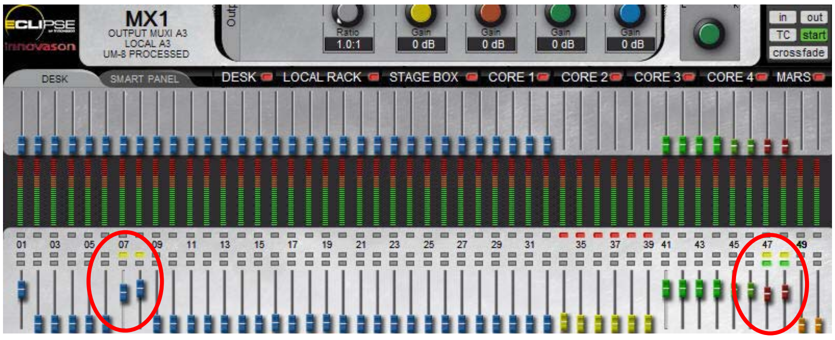
Let's take an example of reverse assign to a Matrix:

1. Press **SEL** on the Matrix fader or Smart Panel controller (with a violet ID).

*The **SEL** button and Label on the Matrix should be flashing:*

2. Look across the console at the status of the **SEL** buttons:

Any steady state **SEL** buttons indicate bus assignments to the selected Matrix - in our example, the stereo Master and input faders **07** and **08** are assigned:



3. Now move your input and Master faders – you are controlling the main input channel and Master levels.

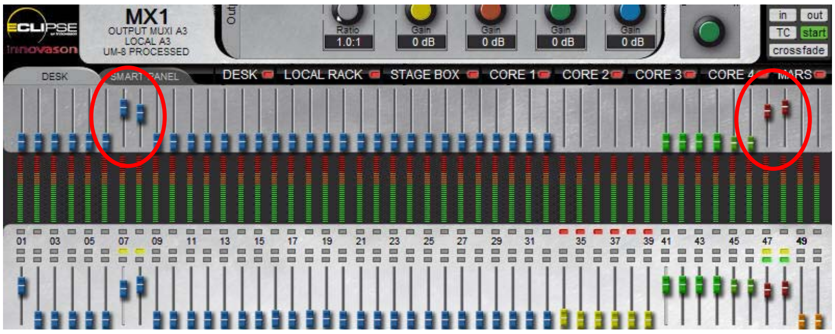
Note that this is different to routing to an aux!

4. So, to set the send levels to the Matrix, press and hold its flashing **SEL** button.

Now the faders on the console update to show the send levels to the selected Matrix.

5. Keep holding the Matrix **SEL** button and move the faders to change the send levels.

You can confirm the operation from the Main Mix display:



Output Channels

Just like inputs, all mix busses must be assigned to the surface, either to a Fader strip or Smart Panel controller. This creates an output channel which provides level, mute, cue, etc. for the bus output.

A mix bus can be either mono, stereo LR or stereo LRC. This decision is made when you assign channel types to Fader strips or Smart Panel controllers (from the **PERSONAL CONSOLE BUILDER** display).

Note

Note that a stereo LR bus uses two DSP resources; a LRC bus uses three DSP resources.

For now, we are going to concentrate on a mono output channel. You can find more details on stereo channels on Page 184.

Signal Flow

All output channels provide the following:

- Delay – assignable from a pool of 48 delay resources.
- Pre-fader insert (external device, floating DSP resource or internal effects bay)
- Pan
- Main level, Mute and Cue
- Post-fader insert (external device, floating DSP resource or internal effects bay)

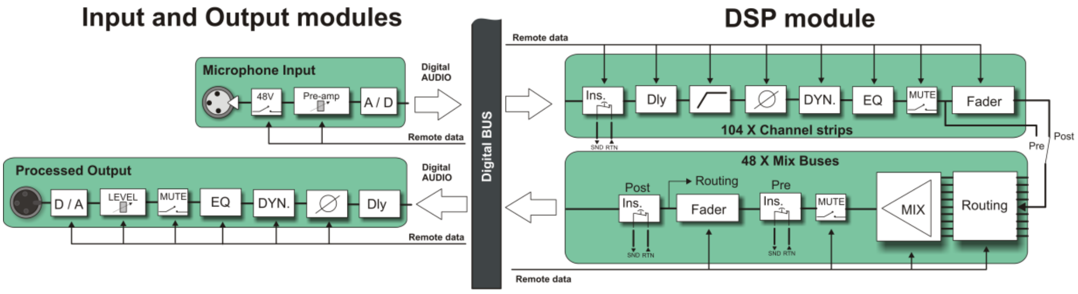
Signal Processing

To apply signal processing you can either insert one of 16 internal “floating” DSP paths, or route the mix bus to a physical output. Every output of a **UM8-PO** card provides output processing (Compressor, Gate, 8-band Parametric EQ, 31-band Graphic EQ and Delay).

Note

Note that there is an important difference between inserting a floating DSP path, and using a processed output. Inserted processing will be applied to everything downstream of the output channel, whereas processing from a UM8 output card applies only to that physical output. This allows you to patch say a single matrix bus to multiple outputs each with its own delay time, graphic EQ, etc.

The following diagram shows the division between processing on the I/O cards and processing on **Eclipse**’s DSP module:



Internal “Floating” DSP Paths

Eclipse provides 16 internal DSP paths which can be assigned to any output channel (mix bus).

Tip

You should use the internal DSP when you want to process the mix bus rather than individual outputs. For example, if you wish to EQ every destination fed from the Master, then it makes sense to EQ the Master bus, and not the separate outputs from the UM8 card.

There are 16 mono internal processing paths which you can insert into any output channel (Aux, Group, Matrix or Master) either pre or post fader. Note that, if you wish, you can insert two paths: one pre and one post fader in order to increase the mix bus DSP.

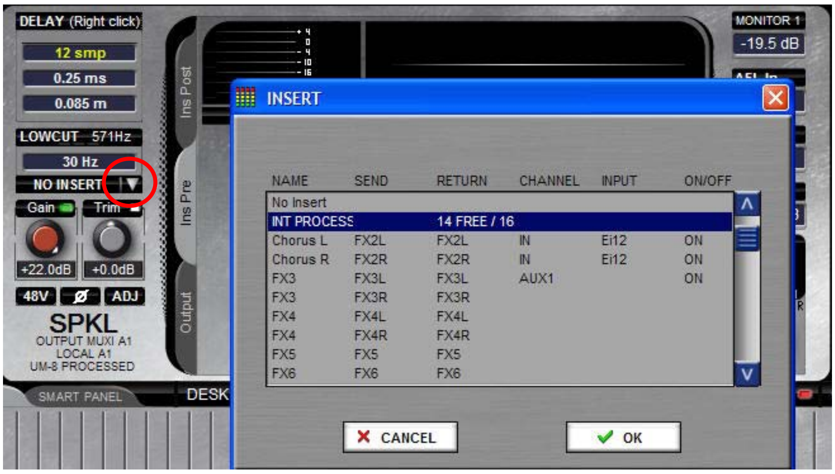
Each internal processing path provides:

- Digital Trim level (from -16dB to +16 dB)
- Phase reverse
- 4-band Parametric EQ
- Compressor
- Gate/Expander
- Low Cut Filter

Inserting Internal Processing to a Mix Bus

To insert a DSP path to a mix bus:

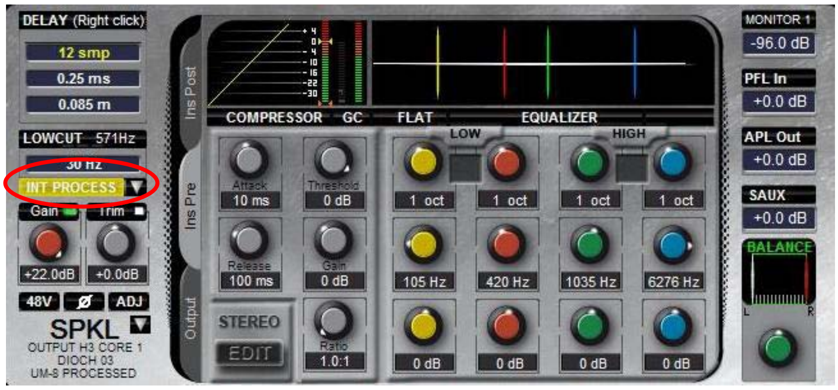
1. Select the output channel (mix bus) you want to process (press **SEL** on the fader or Smart Panel controller).
2. Then click on either the **Ins Pre** or **Ins Post** tab to select whether the processing will be pre or post-fader.
3. Click on the down arrow beside the insert on/off button to open the **INSERT** selection list:



NAME	SEND	RETURN	CHANNEL	INPUT	ON/OFF
No Insert					
INT PROCESS		14 FREE / 16			
Chorus L	FX2L	FX2L	IN	Ei12	ON
Chorus R	FX2R	FX2R	IN	Ei12	ON
FX3	FX3L	FX3L	AUX1		ON
FX3	FX3R	FX3R			
FX4	FX4L	FX4L			
FX4	FX4R	FX4R			
FX5	FX5	FX5			
FX6	FX6	FX6			

4. Select **INT PROCESS** - and **OK** or press [**Enter**].

An internal DSP path is now assigned to the selected channel and is automatically switched on:



If the output channel is stereo, then you are asked to assign an internal DSP path to each component channel: left, right and centre (if applicable).

5. You can now use the INPUT **Trim**, **Ø** DYNAMICS, DELAY, LOW CUT and PARAM EQ controls to adjust the internal processing parameters.

The method of control is identical to that used on input channels, so please see Page 131 onwards for details.

UM8 Processed Outputs

Each bus which is patched to a UM-8PO output can access a full range of DSP processing provided by the card itself.

Tip

You should use output processing when you want to treat a specific destination. For example, to patch a single Matrix bus to multiple outputs each with its own delay time, EQ, etc.

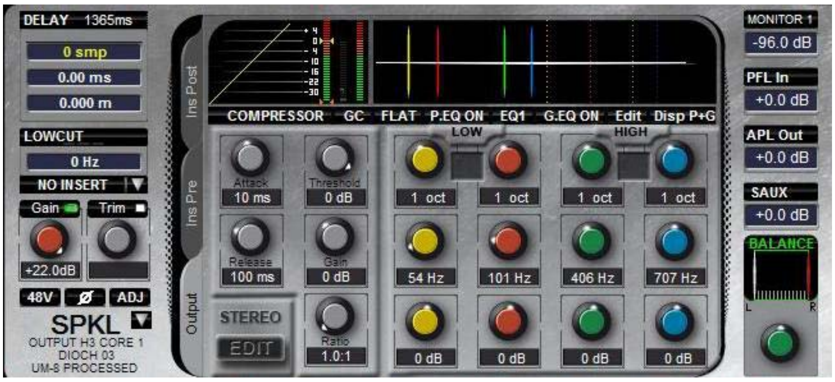
Every **UM8-PO** output provides:

- Output gain (adjustable from +10.5dB to +22 dB)
- Phase reverse
- Delay – up to 1365ms
- Compressor/Limiter
- Gate/Expander
- 8-band Parametric EQ
- 31-band Graphic EQ

Controlling UM8 Processing

1. Select the output channel (mix bus) you want to process (press **SEL** on the fader or Smart Panel controller).
2. Then click on the **Output** tab on the Main Mix display:

The Selected Channel controls (DYNAMIC, PARAM EQ, etc.) update to show and control the output processing:



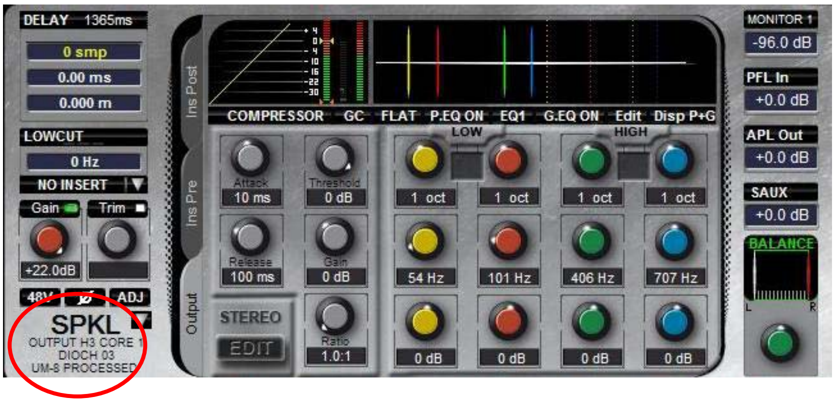
Note

Note that you can only access output processing if the mix bus is patched to a UM8 output. If there is no patch, then the display shows No Patch.

If the mix bus is patched to multiple outputs:

3. Press the **SEL** button to cycle through each output.

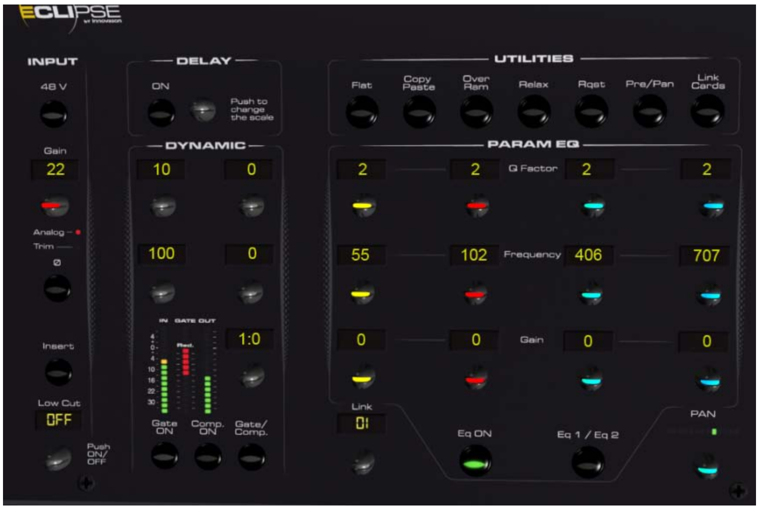
Use the output Label, alias and system description to make sure you are controlling the desired output:



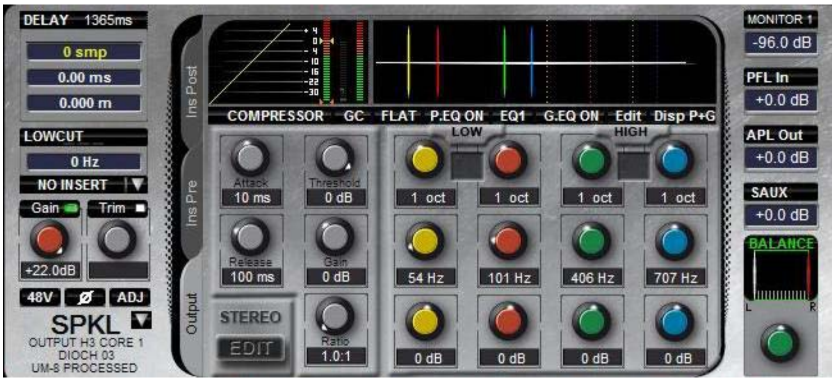
If your output channel is a stereo LR or LRC bus, then use the STEREO **EDIT** button to access the Left, Right or Centre component channels, see Page 189 for details.

4. Having selected the correct output, you can use the Selected Channel controls (DYNAMIC, PARAM EQ, etc.) to adjust the output processing.

Most functions are controlled in a similar manner to those on an input channel:



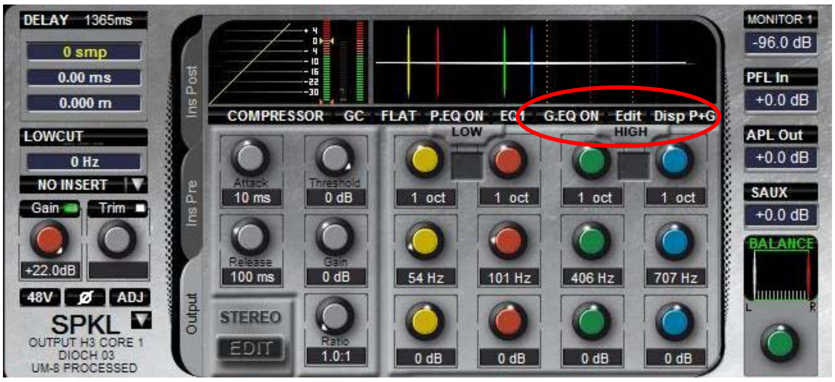
- **Output Gain** - turn the **Gain** control to adjust output gain from +10.5dB to +22 dB.
- **Phase Reverse** - press **Ø** to reverse the phase of the selected output.
- **Delay** – turn the delay control to adjust the delay time, and press down to change the mode of control (sample, ms or metres). The delay can be turned on or off with the **ON** button. Note that the maximum delay time of a UM8 processed output is 1365ms.
- **Compressor/Limiter** – as for an input channel, see Page 138.
- **Gate/Expander** – as for an input channel.
- **8-band Parametric EQ** – see Page 141. The **EQ1/EQ2** button on the PARAMETRIC EQ panel pages the EQ controls between parametric EQ bands 1 to 4 and 5 to 8, and the Graphic EQ. An overview of all EQ parameters is provided on the Main Mix display:



⏩ Controlling the 31-band Graphic Equaliser

The 31-band Graphic Equaliser is controlled from the Main Mix display and **Geq** pop-up window.

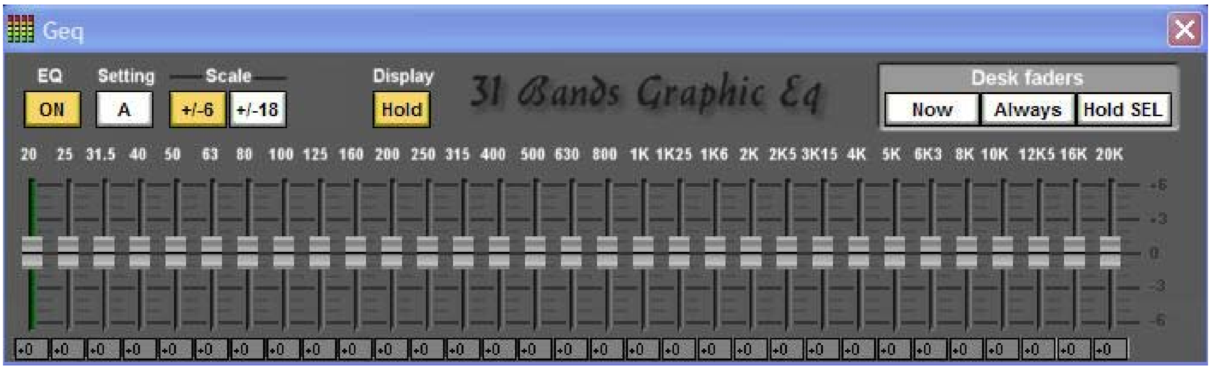
1. On the Main Mix display you can select:



- **G.EG ON** – turns the Graphic EQ on or off (yellow = on)
- **Edit** – selects the Geq pop-up window.
- **Disp P+G** – toggle this on-screen button to view both parameter and graphic EQ on the EQ curve (as above), or display the 8-band parameter EQ only.

2. To open the **Geq** window, either click on **Edit** or press the **EQ1/EQ2** button on the PARAM EQ panel.

*The **Geq** pop-up window appears and can be positioned anywhere on the Main Mix display:*


Geq
EQ
Setting
Scale
Display
ON
A
+/-6
+/-18
Hold
31 Bands Graphic Eq
Desk faders
Now
Always
Hold SEL
20 25 31.5 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1K25 1K6 2K 2K5 3K15 4K 5K 6K3 8K 10K 12K5 16K 20K
+6
+3
0
-3
-6
+0

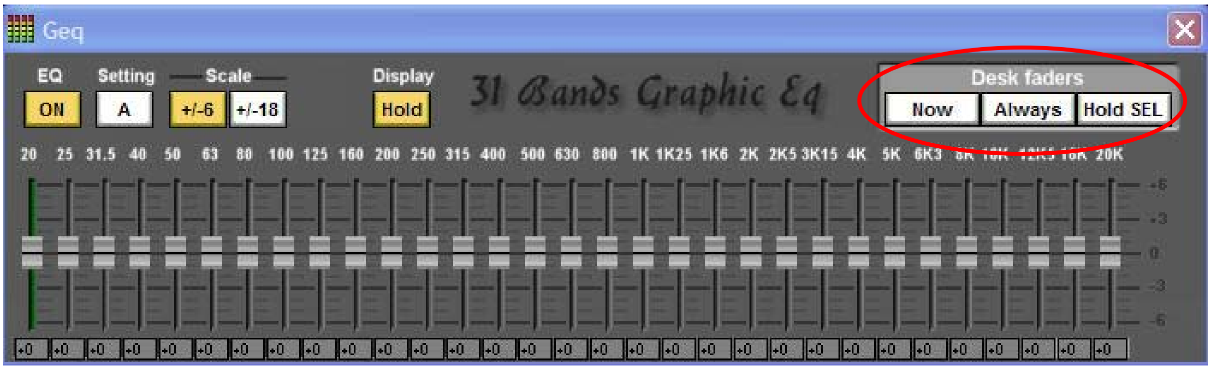
Tip

Note that a button on the User Defined Panel may be assigned to open the Geq Editor window, see next page.

3. On the left of the Geq window are:

- EQ **ON** - turns the GEQ on or off (yellow = on)
- Setting **A** or **B** - toggles between 2 presets (A and B).
- Scale **+/-6** or **+/-18** – selects the fader range. You choose between -6 to +6dB or -18 to +18dB.
- Display **Hold** – select this option and the **Geq** window will automatically appear each time the bus is selected.

4. To control the Graphic EQ from the console, use the **Desk faders** options as follows:


Geq
EQ
ON
Setting
A
Scale
+/-6
+/-18
Display
Hold
31 Bands Graphic Eq
Desk faders
Now
Always
Hold SEL
20 25 31.5 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1K25 1K6 2K 2K5 3K15 4K 5K 6K3 8K 10K 12K5 16K 20K
+6
+3
0
-3
-6

- **Now** – this option assigns the Graphic EQ to the first 32 faders of the desk for a single operation. If you select a different channel and return to the current output, the Graphic EQ will not be re-assigned to the faders.
- **Always** – select this option and every time you re-select the current output channel, the Graphic EQ is assigned to the first 32 faders.
- **Hold SEL** - select this option, and every time you press and hold the **SEL** button on this output channel, the Graphic EQ is assigned to the first 32 faders. When you release the **SEL** button, the faders return to normal operation.

With each option, the 31-band Graphic EQ is assigned to Faders 1 to 31:

You can use the console faders to adjust the gain of each Graphic EQ band. The Labels indicate the EQ frequency; when you touch a fader they show the gain adjustment in dB.

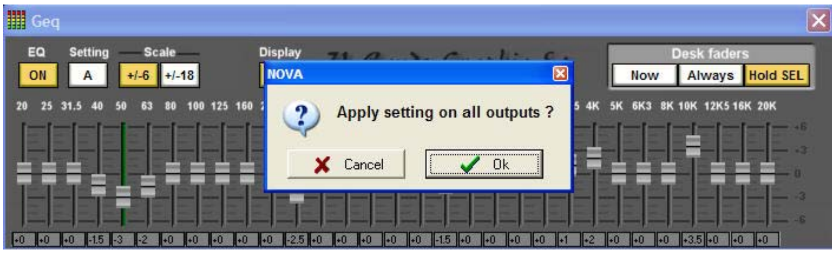
Fader 32 on the console switches the fader range, and is equivalent to the on-screen **+/-6** to **+/-18** button. Open or close the fader to activate the scale change.

Tip

⏩ Setting Geq Options for All Outputs

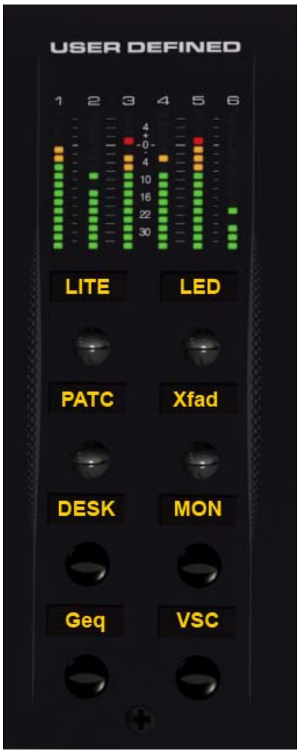
For the Display **Hold**, and Desk faders **Always** or **Hold SEL** options, you can apply the same setting across all output channels as follows:

1. Set the option to the desired status – for example, set the Desk faders **Hold SEL** to on (Yellow).
2. Then click and hold on the option.
3. Keep holding and the following confirmation box appears:



Apply setting on all outputs ?

4. Press **OK** and the setting will be applied to all output channels which have Graphic EQ (all UM8 outputs).



⏩ Quick Access to the Geq Editor

One of the buttons on the User Defined Panel can be assigned to open the Geq Editor window and map the graphic EQ bands onto the console faders in one operation. See Page 322 for details on assigning functions to the User Defined Panel.

Once assigned, you can work as follows:

1. Press **SEL** on an output channel with Graphic EQ processing – e.g. an Aux routed to a UM8 output.
2. Then press the **Geq** button on the User Defined Panel.

The Geq window for the selected aux opens, and the frequencies are automatically assigned onto the console faders.

3. When you have finished making changes, turn off the **Geq** button to return the faders to their normal operation and close the Geq window.

⏩ Setting Geq Options for All Pages of a Show

Tip

For the **ON** and Scale (**+/-6** or **+/-18**) buttons, you can apply the same setting across all Pages within the console's memory. For example, to set the Graphic EQ on or off for a particular bus for the entire show.

Note that this affects the Pages in memory only. To save the changes permanently, make sure you save your File.

1. Set the option to the desired status – for example, select the **ON** button.
2. Then click and hold on the option.
3. Keep holding and a confirmation box appears.
4. Press **OK** and the setting will be applied across all Pages in memory.

Stereo Channels

An input channel can be either mono or stereo LR. Stereo channels use 2 input DSP resources.

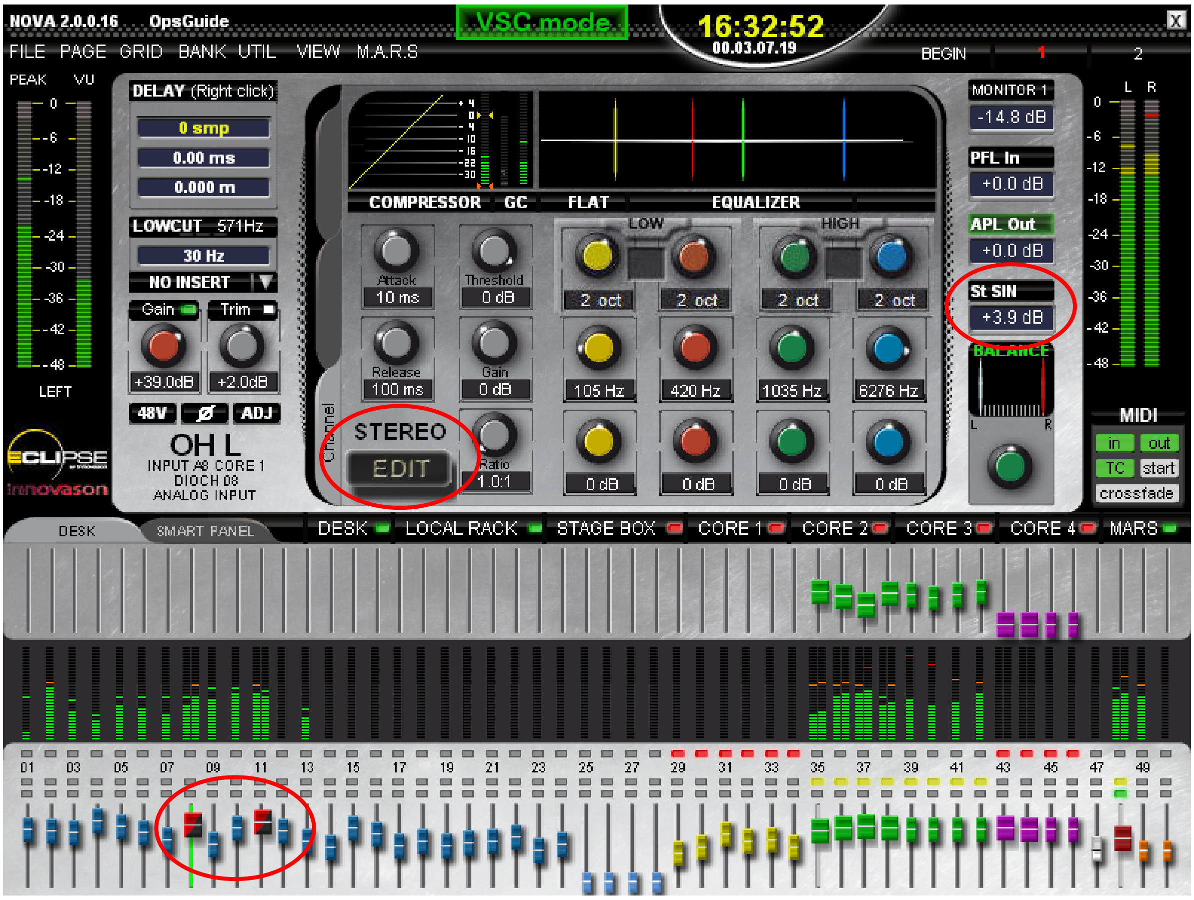
An output channel (mix bus) can be mono, stereo LR or stereo LRC. LR busses use two mix bus resources and LRC busses use 3 mix bus resources.

Stereo input and output channels are handled in a similar manner. This section describes the operation of a stereo input channel with additional notes for outputs where applicable.

For details on configuring stereo inputs and mix busses, please see Pages 238 and 225.

Identifying Stereo Channels

The quickest way to identify stereo channels is from the Main Mix display:



- **Selected Channel** – if the selected channel is stereo, then the text **STEREO** appears on the display, and the channel type updates to **St IN** (stereo input), **St AUX** (stereo Aux), **St Mtx** (stereo Matrix), etc.
- **DESK or SMART PANEL overview** – stereo faders are wider than a mono fader, and stereo inputs are coloured red and black. In addition, the VU metering is stereo. In our example, input faders 8 and 11, Aux faders 35 to 38, Matrix faders 43 and 44, and the Master Fader (48) are stereo.

Also, on the console surface, if the channel has not been renamed, then the default Labels are:

- **SIN** (stereo input).
- **SAUX**, **SGRP**, **SMTX** or **SMST** (stereo Aux, Group, Matrix or Master).

Controlling Parameters

Most parameters are handled in the same way as on a mono channel; the only difference is that you are applying the same settings to left and right sides (or left, right and centre for an LRC output).

The differences are:

- **Metering** – the VUs on the console surface always meter the left channel. The VUs on the Main Mix display meter both the left and right sides of a stereo channel.

Note

Note that if a Group, Aux or Matrix bus is LRC, the on-screen VUs meter only left and right. If the Master bus is LRC, then all three component channels are metered on the right hand side of the Main Mix display.

- **Dynamics** – dynamics processing operates as a true stereo section. All inputs are monitored; the highest input drives the sidechain control signal. This ensures that all sides of the compressor (or limiter, gate, expander) respond in equal measure to the highest input signal (left, right or centre).
- **Delay** – if you insert delay onto a stereo channel, then this automatically uses two (LR) or three (LRC) delay resources.
- **Insert** – if you assign an insert, then you will be prompted to assign the left and then the right side of the insert. If the insert is an internal FX unit, then you will be asked if you wish to link the unit for stereo operation.
- **Pan** – stereo channels offer Width and Balance Control (see next page).
- **Output channel processing** – remember that for output channels to have signal processing, they must be routed to UM8 outputs or be assigned internal DSP resource. LR channels use two DSP resources; LRC channels use three DSP resources.

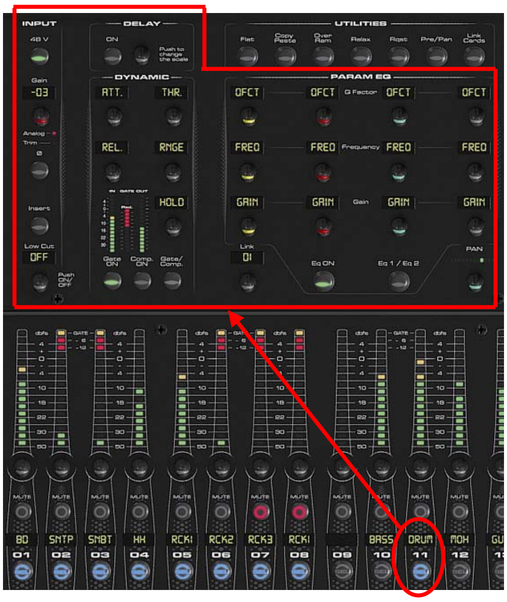
Balance and Width Control

Stereo input, Aux and Group channels offer balance and width control.

Note that there is no balance or width control for a stereo Master or Matrix output channel.

Note

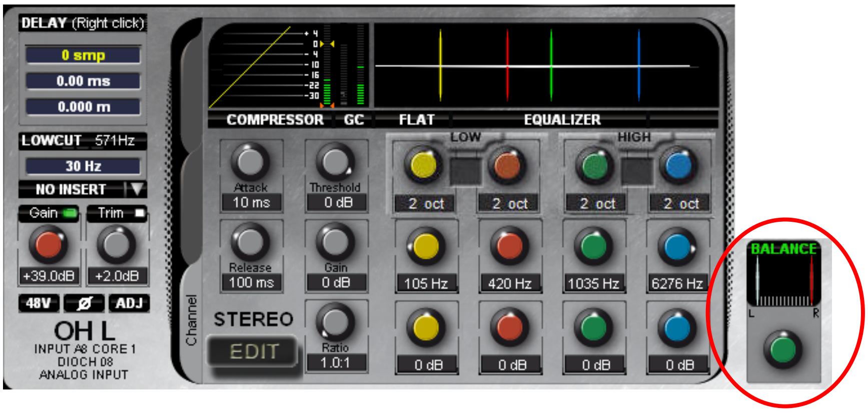
1. Press **SEL** on the channel you wish to pan.



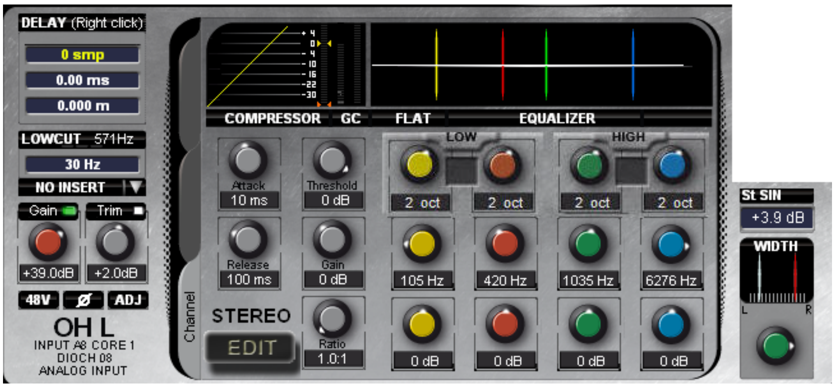
2. Turn the PAN control to adjust the relative positions of the left and right inputs (Balance).

From the default (centre) position, turn the control clockwise to move the left input to the right, or turn anticlockwise to move the right input to the left.

The Main Mix display shows the position of the left (white) and right (red) inputs. BALANCE is highlighted in green when the control is set to its default value:

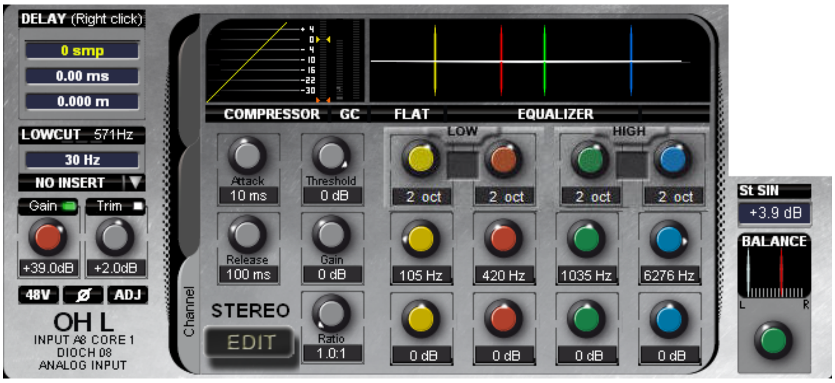


3. Press down, while you turn the PAN control, to adjust the stereo width.



Turn clockwise to increase, or anticlockwise to decrease the width. Note that if you keep turning anticlockwise you can reverse left (white) and right (red).

4. Having reduced the width, you can offset the channel by re-adjusting the balance control:



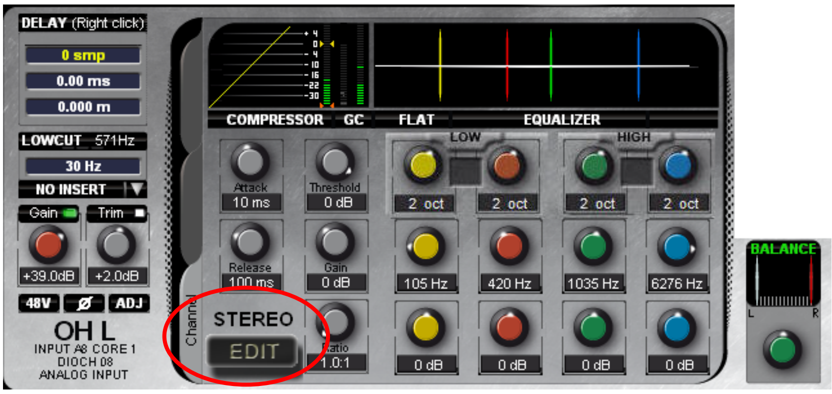
Adjusting LRC Independently

When you adjust a stereo Fader (or Smart Panel controller), you are applying the same adjustments to the left and right sides of the channel (or left, right and centre for an LCR output).

If you wish, you can deploy the component channels to the Smart Panel to adjust settings independently. For example, you may wish to offset the levels.

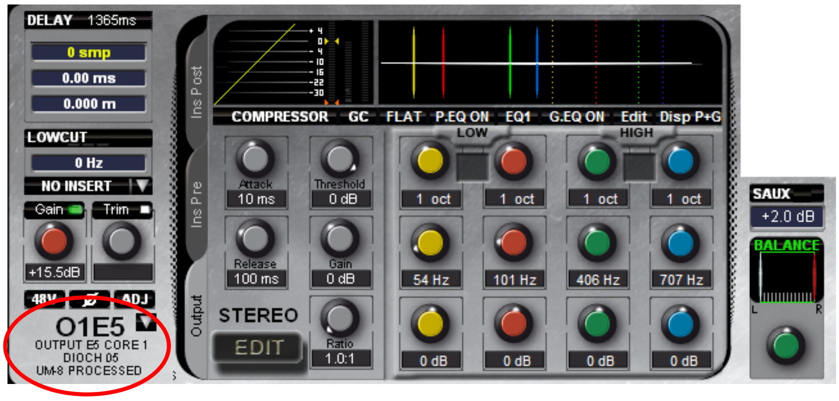
1. Select the stereo channel by pressing the **SEL** button on the Fader or Smart Panel controller.

The Main Mix display shows the left side of the channel:



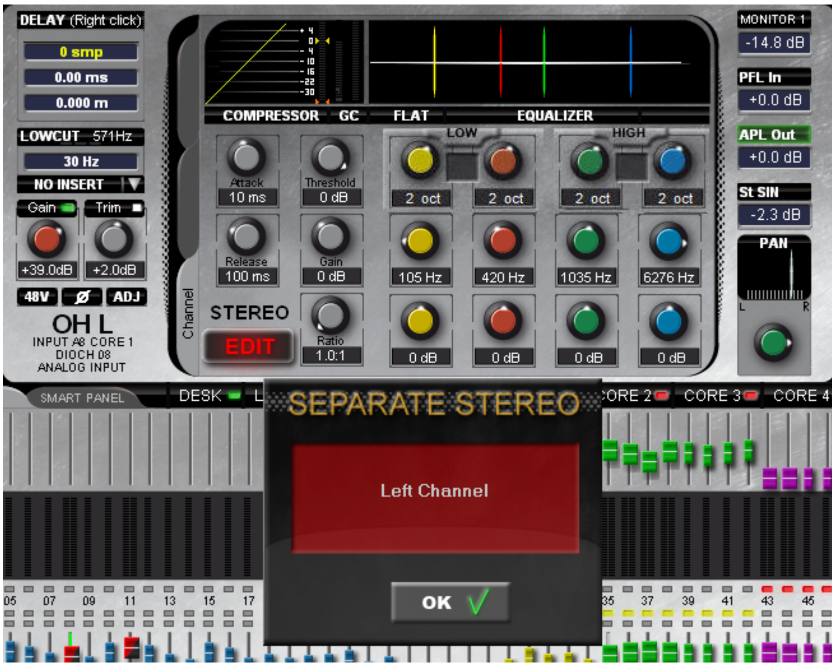
Note

If this is an output channel, then it may be routed to more than one destination. Press **SEL** again to select the required destination*:*



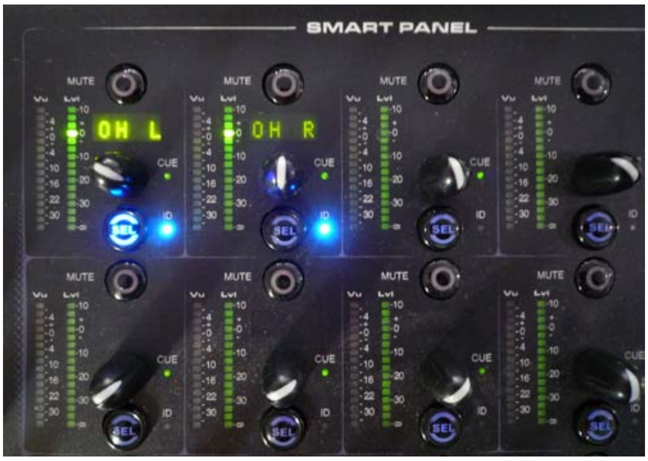
2. Now select the on-screen **EDIT** button.

The left, right (and centre) channels are deployed onto the first three Smart Panel controllers, and the Main Mix display updates as follows:



Note that all normal assignments to the Smart Panel are removed while working in the stereo **EDIT** mode.

3. You can now use the Smart Panel controls to adjust parameters for left, right or centre:

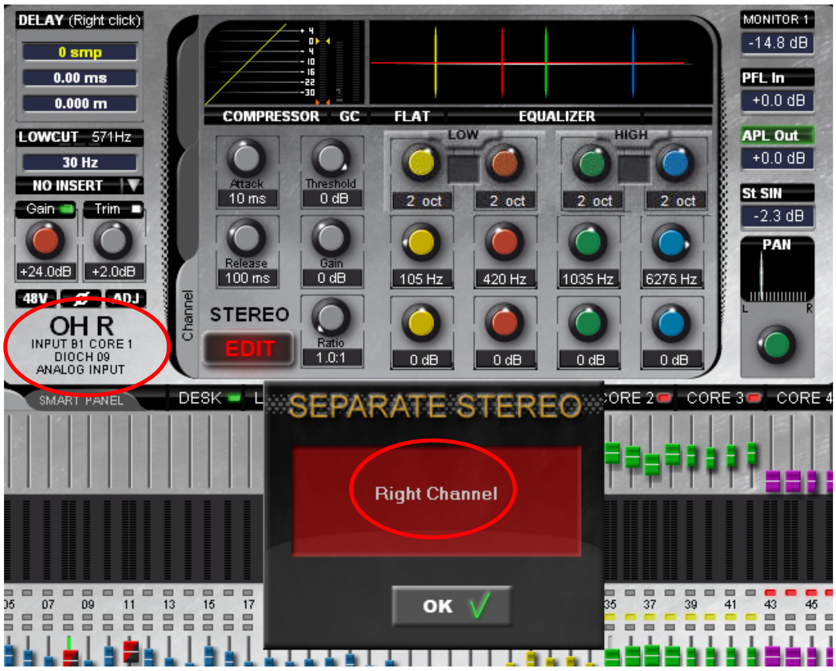


- Turn one of the rotary controls to adjust the fader level.
- Press **SEL** to assign to the selected channel; then adjust parameters in the usual manner.

On output channels remember that some parameters are applied to the channel and others to the UM8 output. For example, if you adjust the right fader level for an Aux, then all destinations fed from Aux Right are affected. However, if you adjust the EQ, then only the selected UM8 output is adjusted.

Note

The SEPARATE STEREO pop-up shows whether you have selected the Left, Right or Centre channel, and the Label updates to show the input or output you are adjusting:

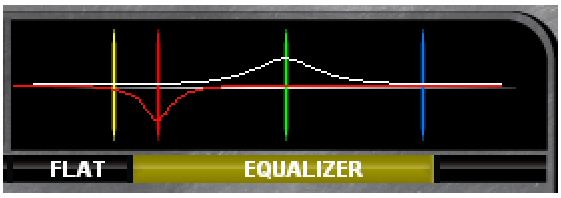


4. Press **OK** to exit the stereo edit mode.

The Smart Panel returns to its normal mode of operation.

5. Now return to the stereo Fader (or Smart Panel controller) and notice the following:

For variable parameters, such as fader level and input gain, any offsets are retained. This includes the EQ section; if offsets have been applied, then the EQ graph shows the left channel in white and the right channel in red:

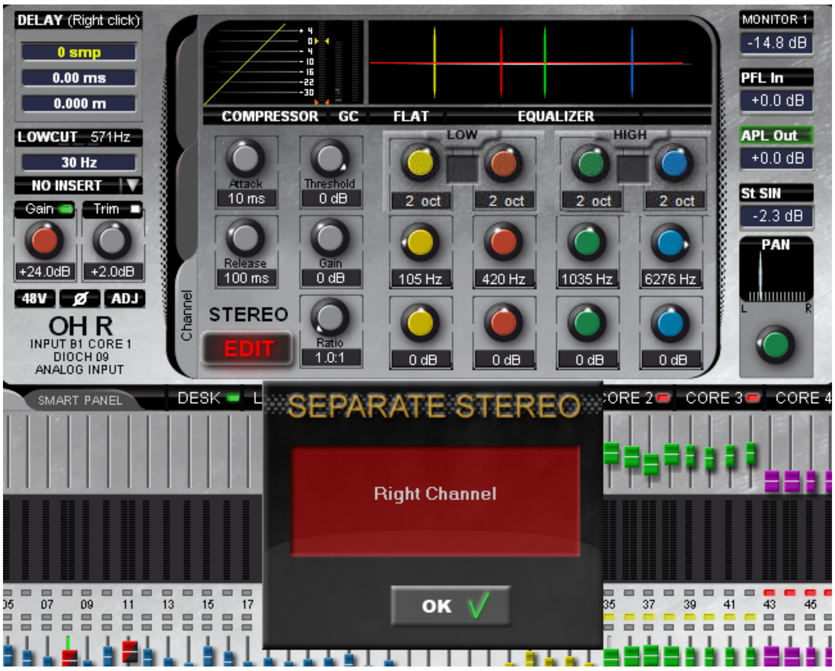


Switched parameters, such as **MUTE**, update if you change the state of the master. So, for example, if you have muted the left input in stereo **EDIT** mode, and then press **MUTE** on the master input fader, the status updates on both left and right sides.

Offline Control of Left and Right Component Channels

If you are working offline, then you do not have a Smart Panel!

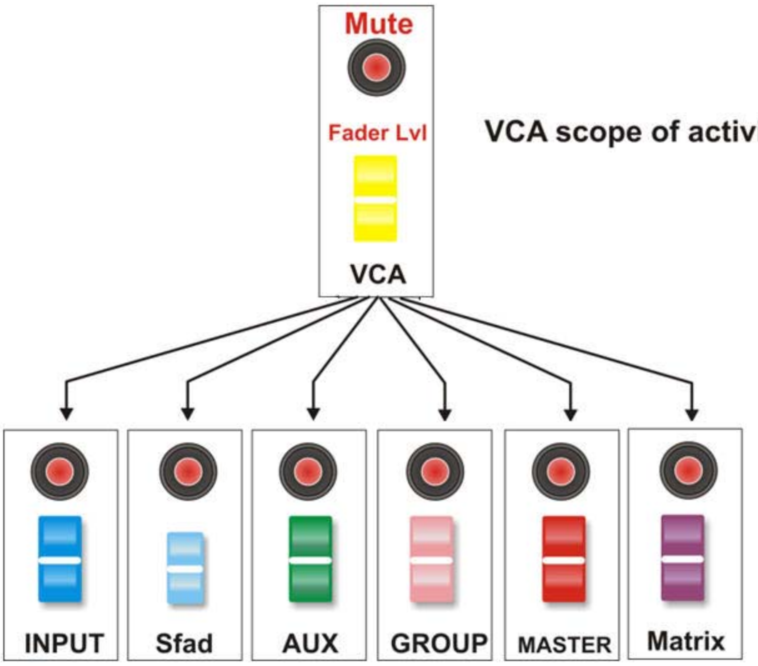
However, you can still switch between the Left and Right component channels by clicking on the red button on the **SEPARATE STEREO** pop-up, and adjusting parameters from the Main Mix display in the usual manner:



VCAs

On **Eclipse** VCAs can be used to provide master control of main level and Mute for several input and/or output channels.

You can configure as many VCAs as you like, using Fader strips or Smart Panel controllers. And, any combination of input, Aux, Group, Master or Matrix channels can be routed to each VCA, including the ability to control Smart Fader slaves (SFADs) or stereo channels:



Note that you cannot nest VCA groups (control a VCA from another VCA). However, you can assign a VCA to SVCAs and stereo channels. And you can assign the same channel to several VCAs at a time.

Each VCA behaves like an analogue VCA with non-moving slave faders. This allows you to see and update slave fader positions even if the VCA master is closed.

Note

Also note that a VCA controls level and MUTE only; you cannot apply master control of EQ, Dynamics, etc.

Configuration

VCA channels (VCA masters) are assigned to Fader strips or Smart Panel controllers from the **Personal Console Builder**, see Page 221. Once configured, a VCA master channel is easily identified by a yellow ID.

Routing to a VCA

The routing from channels to a VCA is made in the same way as other bus routing assignments:

1. Press and hold the **SEL** button on the VCA Fader strip, or Smart Panel controller.
2. Then press the **SEL** buttons on each fader or Smart Panel strip you wish to assign.

You can select any channel type – inputs, Groups, Auxes, Masters and Matrix channels.

This includes the ability to select a Smart Fader VCA; the first time you make an assignment, all Smart Fader slaves are assigned to the VCA. If you wish, you can then deselect Smart fader slaves to control a subset of the Smart Fader input.

Note

Note that if you assign a stereo Group, Aux, Master or Matrix to a VCA, then all the slaves (Left, Right, Centre) are controlled from the VCA; you cannot deselect individual slaves.

VCA Operation

When a channel is assigned to a single VCA:

1. Move the VCA fader, or Smart Panel controller, to adjust the main level of the slave channels.

The VCA behaves like an analogue VCA with non-moving slave faders. This allows you to see and update slave fader positions even if the VCA master is closed.

2. Press **MUTE** on the VCA Fader strip to mute or unmute the slave channels.

Note

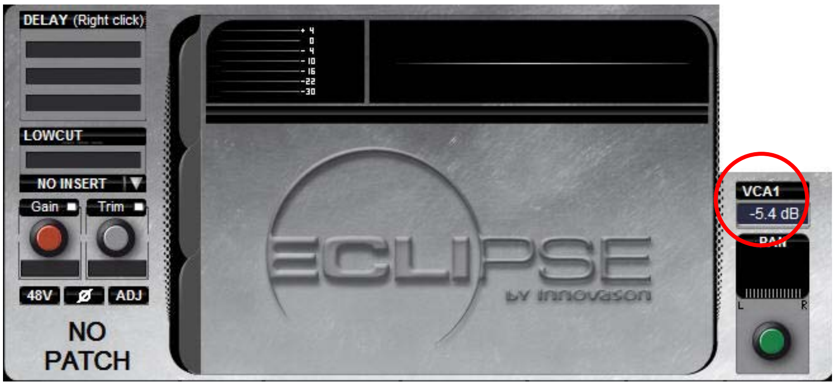
Note that the VCA **MUTE** will not override any existing slave channel **MUTE**s. This is indicated on the slave channels as follows:

- **MUTE** flashing – the channel is muted *only* by the VCA. When you unmute the VCA, the channel **MUTE** cancels.
- **MUTE** steady state - the channel **MUTE** is active; it will not be affected by the VCA **MUTE**. To unmute the channel you must unmute both the VCA and the slave.

3. Select a VCA and notice how the Selected Channel areas of the Main Mix display are blank.

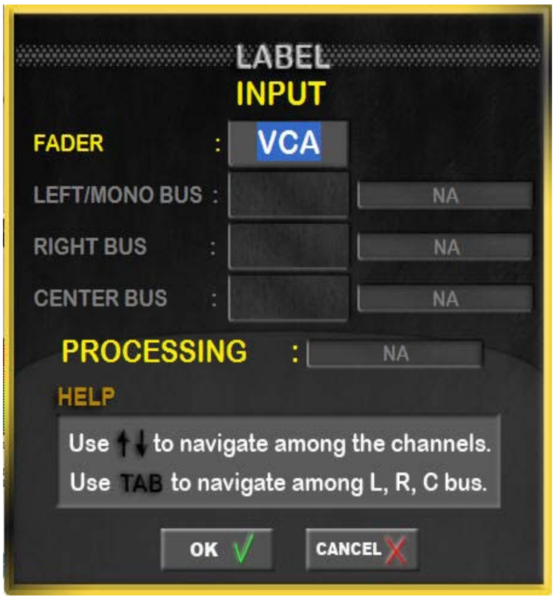
A VCA controls level and MUTE only; you cannot apply master control of EQ, Dynamics, etc.

The VCA level and Label are shown above the PAN area of the display:



4. To change the VCA Label, select the VCA and press [**F3**] on the console keyboard.

The Channel LABEL window appears:



FADER : VCA

LEFT/MONO BUS : NA

RIGHT BUS : NA

CENTER BUS : NA

PROCESSING : NA

HELP

Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

5. You can enter a new 4-character Label from the keyboard.
6. Confirm by pressing **OK**.

The new Label appears on the Fader strip, or Smart Panel controller, and on the Main Mix display.

VCA Logic

It is possible to route the same channel to more than one VCA; for even greater flexibility, there are two logic modes:

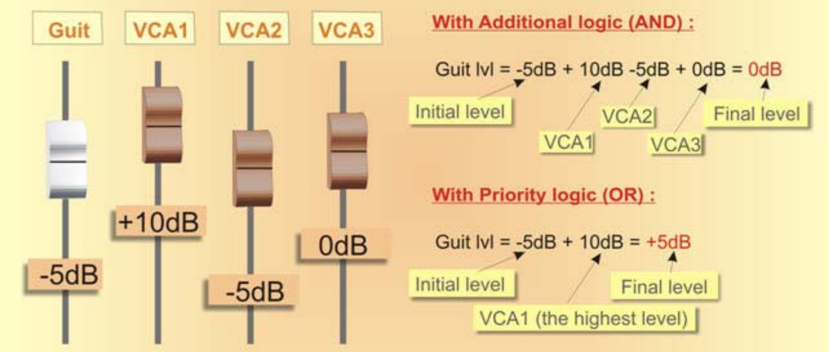
- **Additional logic (AND)** - the levels of each VCA are summed and applied to the slave channel.

This means that *every* VCA has an influence on the controlled channel, and if one VCA is closed (- infinity) then the channel will be cut. You might use this mode where you have drum channels controlled by a Drum VCA and an overall Band VCA. If the Drum VCA is cut and you open the Band, then you would want the drums to remain cut!

- **Priority logic (OR)** – the VCA having the highest level is applied to the slave channel.

This means that as long as one VCA is open, the channel will never be cut. You might use this mode on a solo guitar mic. Assign the guitar to both the Band VCA and to its own Solo VCA. Normally, its level will set by the Band VCA, but when it comes to solo you can raise the Solo VCA to push up the level of the guitar for the solo. Once the solo has finished, cut the Solo VCA and the guitar mic returns to the normal Band VCA level.

The diagram below shows the effect of each mode when a guitar channel (Guit) is assigned to three VCAs:


Guit
VCA1
VCA2
VCA3
-5dB
+10dB
-5dB
0dB
With Additional logic (AND) :
Guit lvl = -5dB + 10dB -5dB + 0dB = 0dB
Initial level
VCA1
VCA2
VCA3
Final level
With Priority logic (OR) :
Guit lvl = -5dB + 10dB = +5dB
Initial level
VCA1 (the highest level)
Final level

The choice of VCA mode is made from the **General Preferences** window, see Page 428.

Assignable Delays

Eclipse offers a pool of 48 delays, assignable to any input or output (mix bus) channel. Each delay may be adjusted from 0 to 222ms.

Note

Note that assigning a delay to a stereo LR channel uses two delay resources; assigning a delay to stereo LRC channel uses three resources.

Assigning a Delay Resource

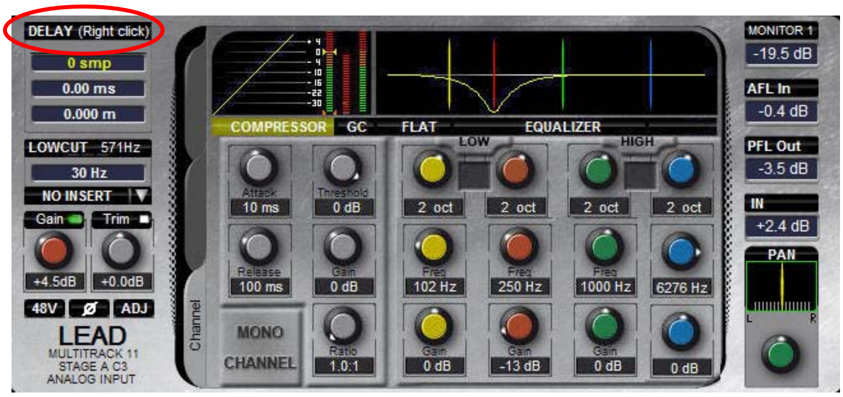
On an input channel, the delay is always inserted pre-fader. However, on an output channel you can choose whether to insert a delay pre-fader, post-fader or both.

⏩ To assign a delay to an Input channel:

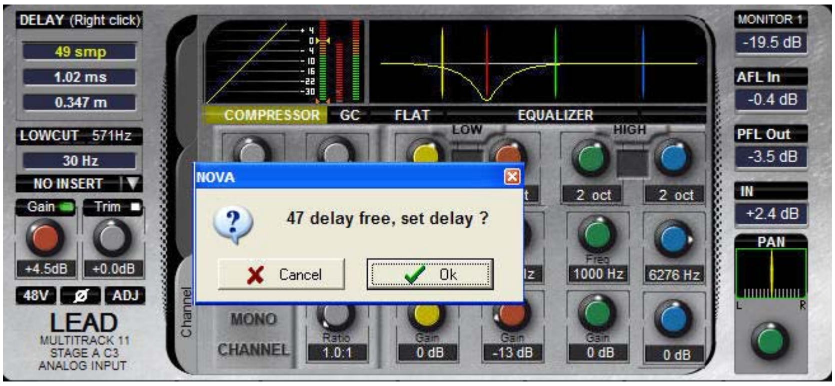
1. Select the channel (press **SEL** on the fader or Smart Panel controller).

The Main Mix display updates to show the parameters for the selected channel.

2. Press the DELAY **ON** button on the console, or right-click on the **DELAY** box on the Main Mix display:



*A pop-up appears indicating the number of delay resources available – in our example, **47** out of 48:*



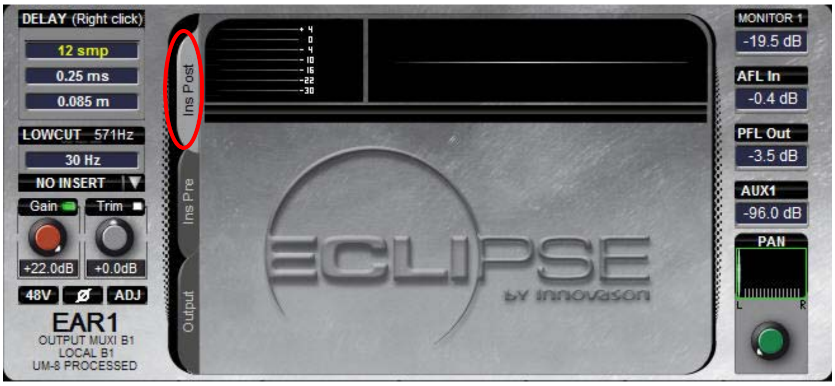
47 delay free, set delay ?

3. Press **OK** to assign the delay.

⏩ To assign a delay to an Output channel (mix bus):

1. Select the output channel (press **SEL** on the fader or Smart Panel controller).
2. BEFORE you press the DELAY **ON** button or right-click to assign the delay, select whether the delay will be pre or post-fader:

- Click the **Ins Pre** tab to assign a pre-fader delay.
- Click the **Ins Post** tab to assign a post-fader delay.



Note

Note that you must select one of these tabs before you can assign a delay.

Also note that the inserted delay will affect all the outputs patched on the bus as it is part of the bus and not individual for each output.

3. Follow the steps in the previous section to assign the delay.

Tip

You can assign a delay pre-fader AND post-fader if you wish to increase the overall delay time available for the output channel.

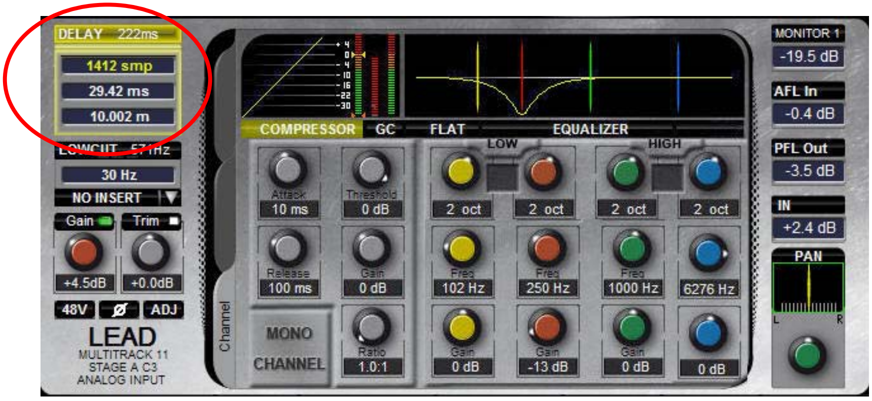
Remember that UM8 outputs include delay within the output card processing (up to 1365ms).

⏩ Adjusting the Delay

1. Once assigned, you can adjust the delay time from the rotary control on the DELAY panel.
2. Push down on the rotary control to change between setting the delay time in:

- Samples
- Milliseconds (ms)
- Metres (m)

You will see the delay time update in the Main Mix display:



Note

Note that the top figure beside DELAY indicates that a maximum delay time of 222ms is available. The actual delay time set is 29.42ms in our example.

3. Press the front panel **ON** button to turn delay on or off.

*The button is lit and the Main Mix **DELAY** area is yellow when delay is on.*

Note

Note that when using an assignable delay on an output channel (mix bus), the minimum delay time is 12 samples. For technical reasons, it is not possible to set a value below this value.

Labels

Each Fader strip and Smart Panel controller has a 4-character user Label.

On input channels, the Label shows:

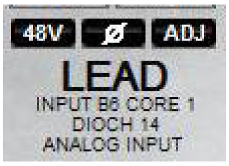
- the input Label (e.g. **MIC1**)
- Or, if the channel is not patched, the generic channel name: e.g. **IN**.

On output channels, the Label shows:

- the output Label (e.g. **SPK1**).
- Or, if the bus is not patched, the generic mix bus name: e.g. **AUX**, **GRP**, **MST**, **MTX**.

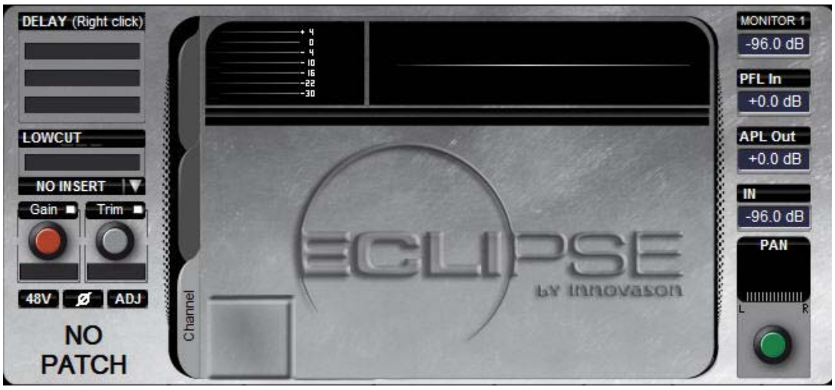
On stereo channels, VCAs and Smart VCAs, you will see the FADER Label; the default FADER Label displays the channel type (e.g. SIN = stereo input, SAUX = stereo aux, VCA = VCA!).

Labels are also shown on the Main Mix display, along with additional information. In our example:



- **LEAD** – this is the 4-character input Label.
- **INPUT B6 CORE 1** – this is the system description of the source. Our example indicates that the input is connected to DioCore 1, card slot B, input 6.
- **DIOCH 14** – indicates that the input is connected via Ethersound channel 14.
- **ANALOG INPUT** – indicates that the input is analogue.

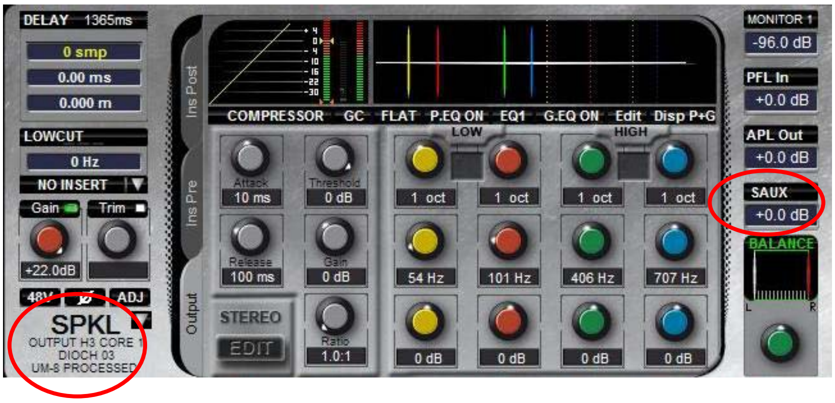
If the selected channel is not yet patched, then the Main Mix display shows **NO PATCH**:



Note that a mix bus may be patched to multiple destinations:

1. Press the **SEL** button on the output channel to cycle through each patched output.

The output Label, system description and any output processing parameters update accordingly:



On stereo outputs, you will see the output Label and parameters for the left channel unless you use STEREO **EDIT** mode, see Page 189

Note that on Aux channels, the name of the Personal Mix (e.g. John) takes priority over the channel Label if a Personal Mix is loaded. See Page 387 for details.

Changing Labels

Entering Labels varies slightly depending on whether you are labelling an input, output or VCA channel, so let's take an example of each:

⏩ Labelling an Input

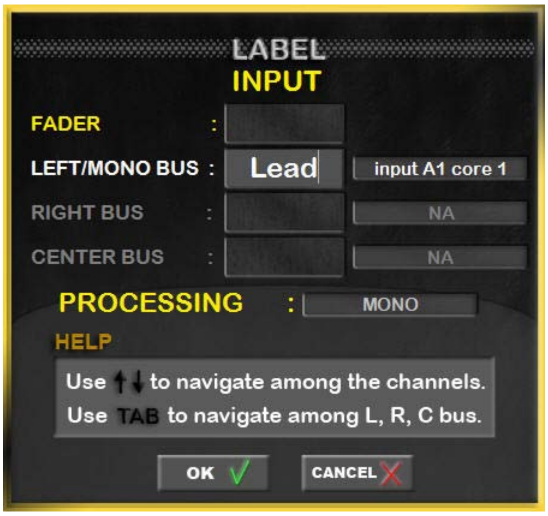
To Label an input from the console surface:

1. Press **SEL** on the input Fader or Smart Panel strip to select the channel.
2. Then press [**F3**] on the console keyboard.

A switch on the User Defined panel can also be assigned to this function, see Page 322.

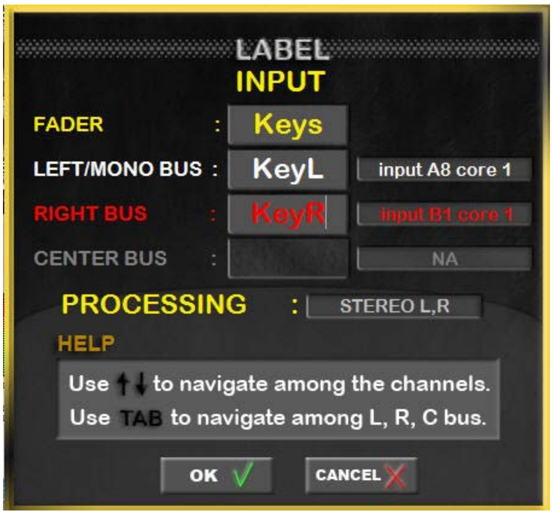
The channel LABEL window appears:

Mono Input Channel



LABEL
INPUT
FADER :
LEFT/MONO BUS : Lead input A1 core 1
RIGHT BUS : NA
CENTER BUS : NA
PROCESSING : MONO
HELP
Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

Stereo Input Channel



LABEL
INPUT
FADER : Keys
LEFT/MONO BUS : KeyL input A8 core 1
RIGHT BUS : KeyR input B1 core 1
CENTER BUS : NA
PROCESSING : STEREO L,R
HELP
Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

3. On a mono channel, enter a 4-character Label into the **LEFT/MONO** field – e.g. **Lead**.
4. Confirm by pressing **OK**.

The input Label appears on the Fader strip and on the Main Mix and Patch displays.

5. On a stereo channel, press **[TAB]** to navigate between the different fields, and enter a 4-character Label into each active field
6. Confirm by pressing **OK**.

*The **FADER** Label appears on the Fader strip.*

*The **LEFT** and **RIGHT** input Labels are used on the Main Mix and Patch displays.*

All other fields are for information only.

Labelling an Output (Destination)

To Label an output from the console surface:

1. Press **SEL** on the output Fader or Smart Panel strip to select the channel.

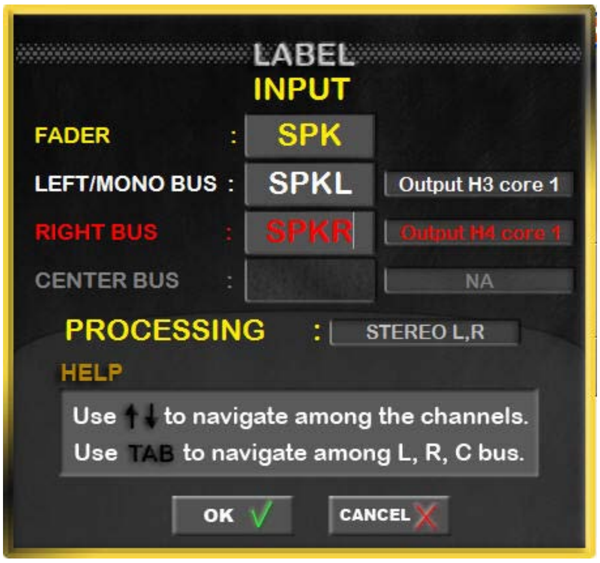
Note

Note that if the mix bus is patched to multiple outputs, then you should keep pressing **SEL** until the output you wish to Label appears on the Main Mix display.

2. Then press [**F3**] on the console keyboard.

A switch on the User Defined panel can also be assigned to this function, see Page 322.

The output LABEL window appears:



FADER : SPK

LEFT/MONO BUS : SPKL Output H3 core 1

RIGHT BUS : SPKR Output H4 core 1

CENTER BUS : NA

PROCESSING : STEREO L,R

HELP

Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

3. On a mono channel, enter a 4-character Label into the **LEFT/MONO BUS** field.
4. Confirm by pressing **OK**.

The output Label appears on the Fader strip and on the Main Mix and Patch displays.

5. On a stereo channel, press **[TAB]** to navigate between the different fields, and enter a 4-character Label into each active field
6. Confirm by pressing **OK**.

*The **FADER** Label appears on the Fader strip.*

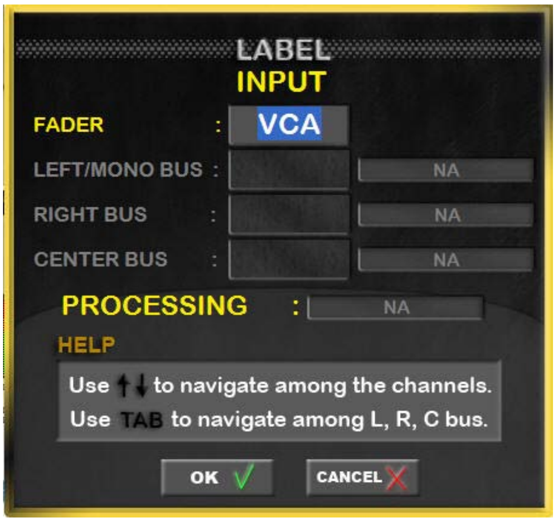
*The **LEFT** and **RIGHT** output Labels are used on the Main Mix and Patch displays.*

All other fields are for information only.

⏩ Labelling a VCA or Smart VCA

This operation can only be performed from the Main Mix display and Labels the VCA fader.

1. Select the Fader or Smart Panel strip and press [**F3**] on the console keyboard.



LABEL
INPUT

FADER : VCA
LEFT/MONO BUS : NA
RIGHT BUS : NA
CENTER BUS : NA
PROCESSING : NA

HELP
Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

2. Enter a 4-character Label into the **FADER** field.
3. Confirm by pressing **OK**.

The new Label appears on the Fader strip, or Smart Panel controller, and on the Main Mix display.

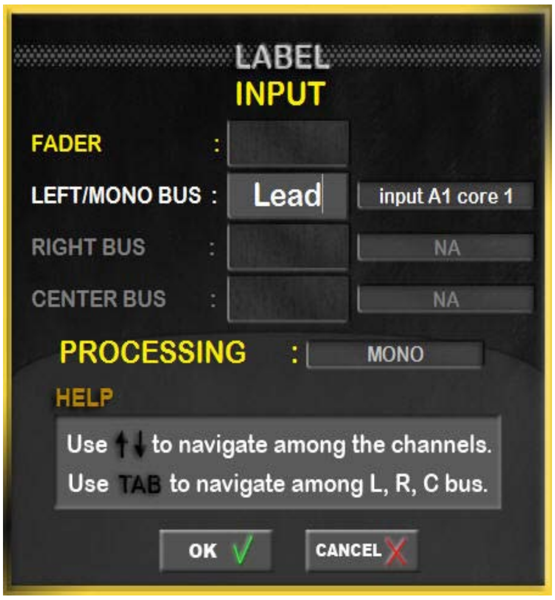
⏩ Labelling Multiple Inputs, Outputs or Channels

Within the LABEL window, you can use the [**Up**] or [**Down**] arrows on your keyboard to navigate up or down the Fader numbers of the console.

Alternatively, you can quickly name a consecutive range of channels as follows:

1. Press **SEL** on the first Fader or Smart Panel strip you want to Label.
2. Then press [**ALT**] + [**F3**] on the console keyboard.

The LABEL window appears:



LABEL
INPUT
FADER :
LEFT/MONO BUS : Lead — input A1 core 1
RIGHT BUS : NA
CENTER BUS : NA
PROCESSING : MONO
HELP
Use ↑↓ to navigate among the channels.
Use TAB to navigate among L, R, C bus.

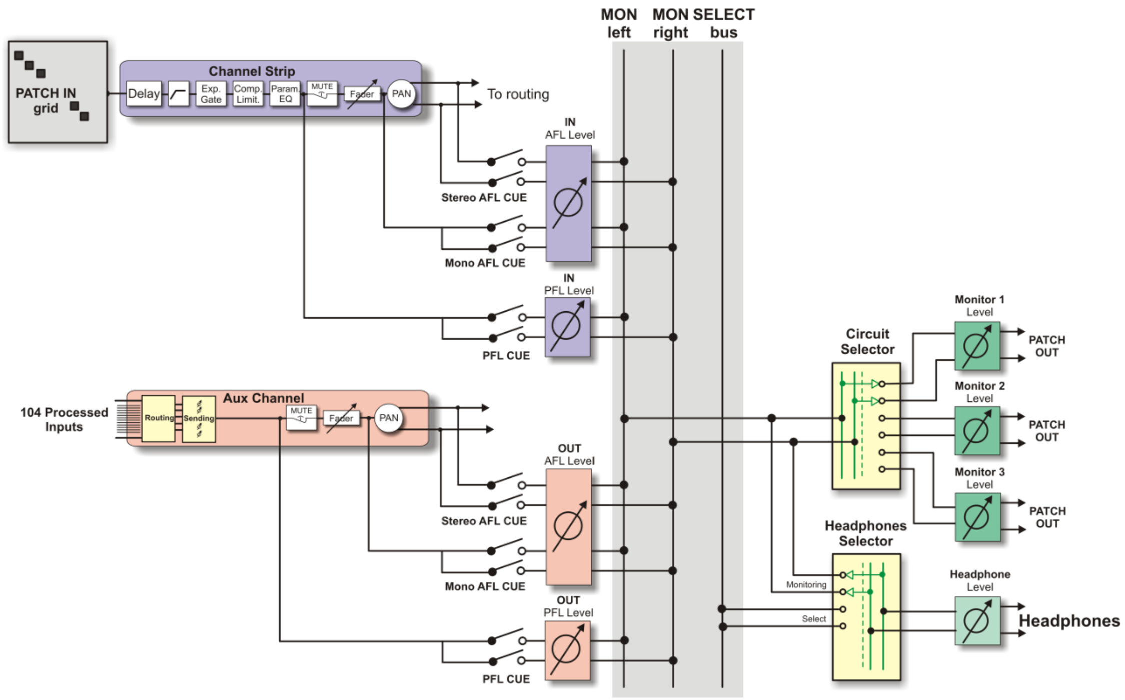
3. Enter a 4-character Label from the keyboard.
4. Confirm by pressing **OK**.

The LABEL window remains open and automatically selects the next Fader or Smart Panel strip on the console.

5. Enter the next 4-character Label and confirm with **OK**.
6. If you wish to keep any existing Labels, then press **OK** to retain them.
7. Continue labelling until you wish to exit. Press **CANCEL** to close the LABEL window.

Monitoring

In addition to the 48 configurable mix busses, **Eclipse** provides a stereo **CUE** bus for monitoring. This bus can feed up to three monitor circuits and headphones, each with independent level and selector control:



Only one Monitor circuit, plus Headphones, is active at a time. Note that the Headphone circuit can receive either the stereo monitor bus, or a Select bus.

On input channels, **CUE** may be **PFL** (pre-fader listen) or **AFL** (after-fader listen). Note that input channel **CUE** buttons may also operate as SIP (Solo-In-Place).

On output channels, **CUE** may be **PFL**, **AFL** or **APL** (after-processing listen).

For each cue type (**IN PFL**, **IN AFL**, **OUT PFL**, **OUT AFL** and **OUT APL**), you can set a trim level so that when you change from say AFL on an output channel to PFL on an input channel, you can match the levels accordingly.

Only one cue type is active at a time, so when you **CUE** an input channel it cancels any output **CUE**s and vice versa.

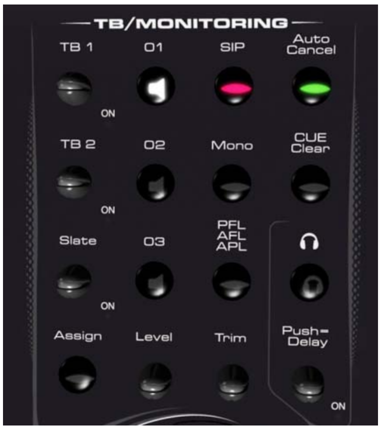
If you wish, you can configure the 1/2/3 Monitor circuit selector to respond to different channel **CUE**s. So, for example, the system can automatically switch to Monitor circuit 3 if you **CUE** a drum mic channel.

You can also assign a physical fader to control the Monitor level of the active output.

And can configure a number of Monitoring preferences, such as defaulting to **CUE** on the Master if no other **CUE**s are active.

Monitor Outputs 1, 2 and 3

Monitor switching and level control is handled from the TB/MONITORING panel:



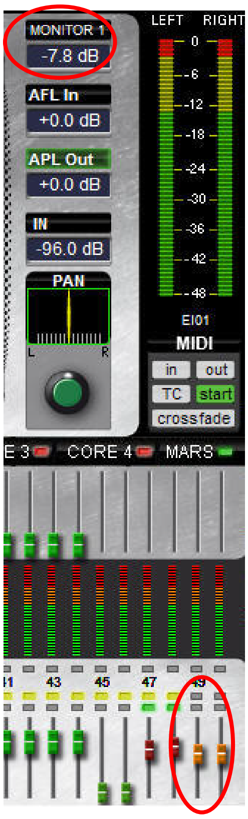
1. Press the **01**, **02** or **03** buttons to select a monitor output.

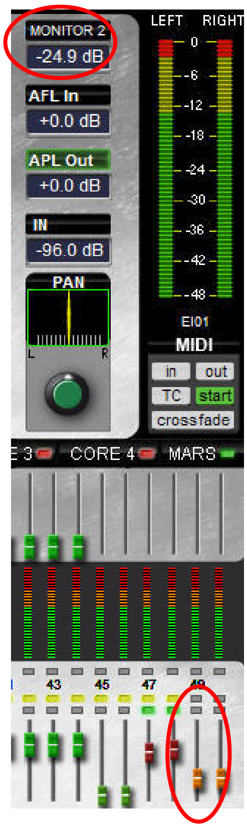
The buttons intercancel as only one monitor circuit can be active at a time.

You can turn off all three buttons if you wish. Use this mode to turn off all monitoring when working with headphones.

2. With a monitor circuit selected (e.g. **01**), turn the **Level** control to adjust the level.

*As you move the control you will see the **MONITOR 1** level at the top right of the Main Mix display, and on the orange faders:*





3. Select a different circuit (e.g. **02**), and both areas update to show the level of the **Monitor 2** output.
4. Press **Mono** to mono the monitor bus.

This button will stay active while you switch to different monitor outputs.

Note

Note that the **Assign** button on the TB/MONITORING panel is reserved for future implementation.

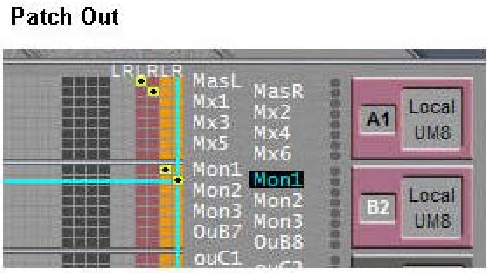
Patching the Monitor 1, 2 and 3 Circuits

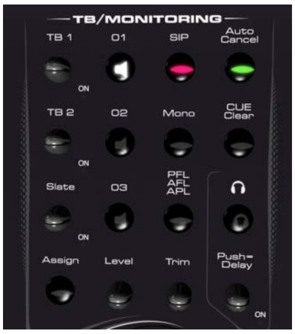
Using the **PATCH OUT** grid, described on Page 247, you can patch each of the monitor circuits to physical outputs.

Note

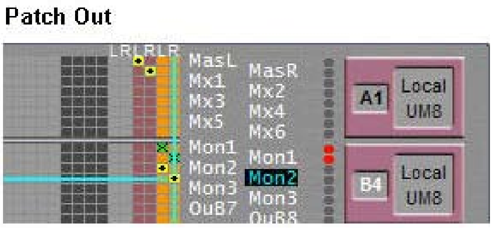
It is important to have the correct circuit active when you patch. The steps below explain how to patch three monitor circuits to three different sets of physical outputs:

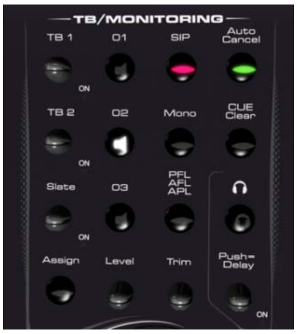
1. Select Monitor **01**, and patch the first monitor circuit (orange monitor faders) using the **PATCH OUT** grid:





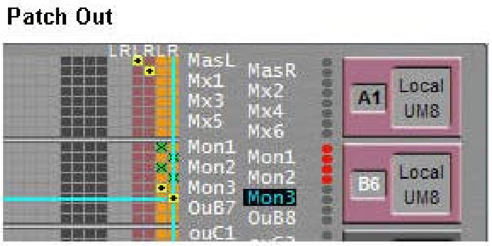
2. Now press Monitor **02**, and patch the second circuit:

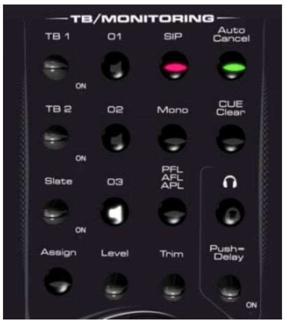




Notice how the orange monitor faders now represent the second circuit. Also note that the first monitor output has been muted; indicated by the red dots in the **Mute** column.

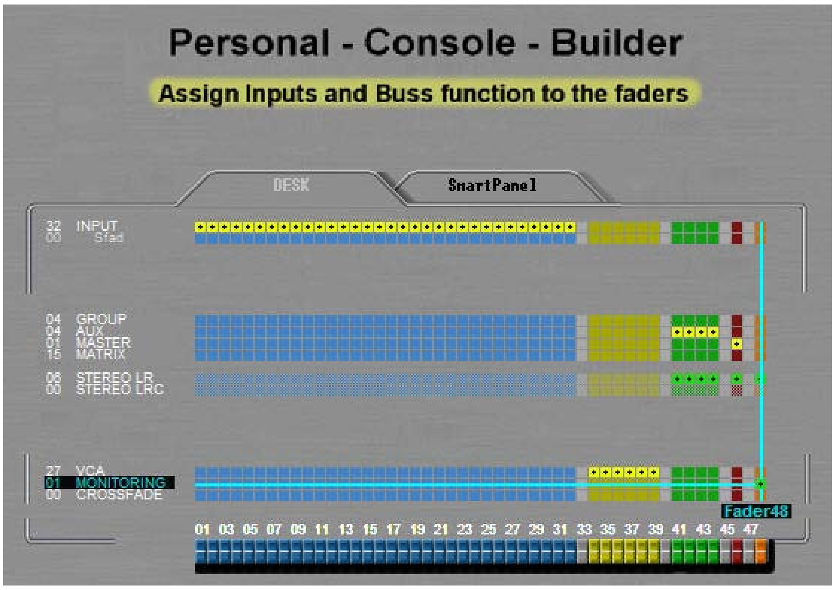
3. Finally, press Monitor **03**, and patch the third circuit:





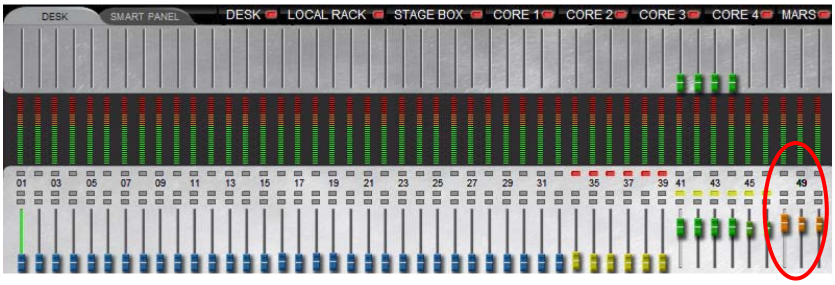
Monitor Level Control from a Fader

Using the **Personal Console Builder**, described on Page 221, you can assign a Fader strip to control Monitor level. In our example below, Fader 48 has been configured as the **MONITORING** fader:



1. Having loaded this PCB configuration, you can use the fader to control the monitor level of the active circuit (**01**, **02** or **03**).

The monitoring fader is indicated by an orange ID on the surface and Main Mix display:



Note that once a monitor fader is assigned to the surface, the **Level** control on the TB/MONITORING panel has no function.

Note

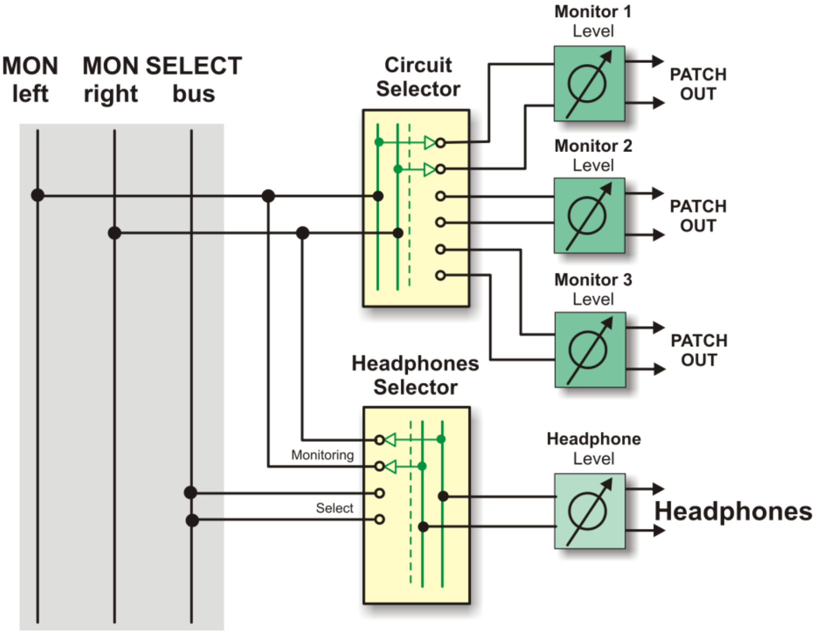
2. Press the **SEL** button on the Monitoring fader to toggle between the left and right outputs of the monitor circuit.

The Headphone Output

The ¼" jack socket, at the front of the console, is automatically fed from the **Headphone** circuit; there is no patching required.

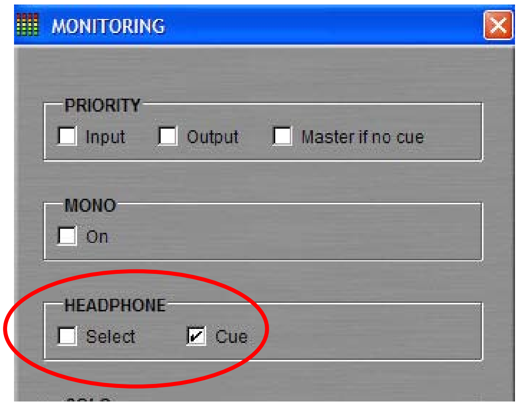
Headphone Monitor Source

The Headphone circuit can receive either the stereo monitor bus, or a Select bus as shown below:



ECLIPSE	**n/a**
🖱	**"UTIL -> Monitoring"**
⌨	**n/a**

This choice is made from the **MONITORING** preferences window:


MONITORING

PRIORITY
☐ Input ☐ Output ☐ Master if no cue

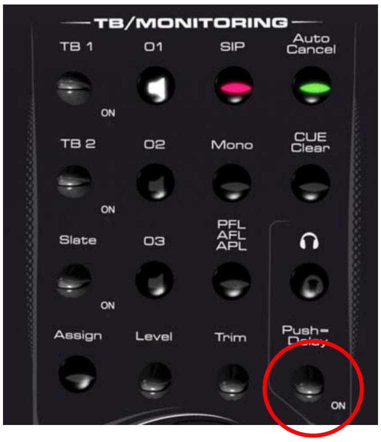
MONO
☐ On

HEADPHONE
☐ Select ☑ Cue

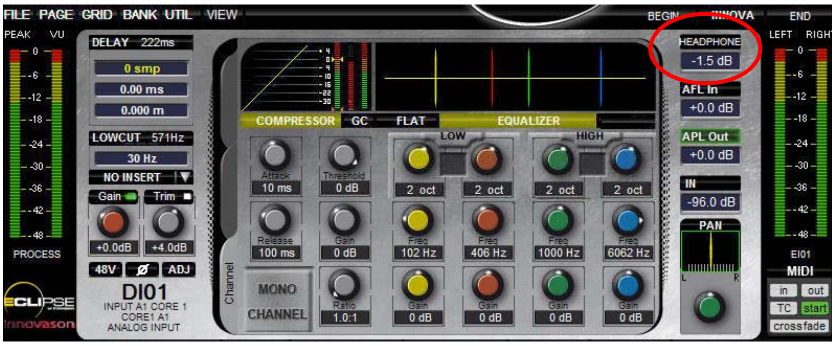
- Tick **Cue** to receive the Cue bus. In this mode, the Headphones behave just like another monitor output except there is no APL for output channels. When APL is selected, the Headphones receive AFL.
- Tick **Select** and the Headphone circuit monitors whichever channel is currently selected (**SEL** active). The Select bus is mono and monitors the selected channel pre-fader.

Headphone Level Control

Turn the Headphone rotary control on the TB/MONITORING panel marked opposite.



As you move the control you will see the **HEADPHONE** circuit level appear at the top right of the Main Mix display:



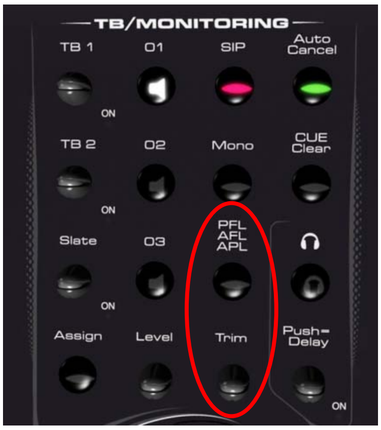
Note

Note that the Headphone mute button and **Push Delay** function on the TB/MONITORING panel are reserved for future implementation.

CUE Modes

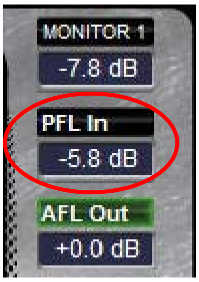
Input Channels

On input channels, the **CUE** button may operate as PFL, AFL or SIP (Solo-In-Place). Here we will deal with PFL and AFL.

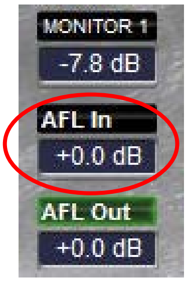


1. Press **SEL** on any input channel.
2. Then press the **PFL/AFL/APL** button on the TB/MONITORING panel to toggle between the options.

You will see the input listen mode update on the Main Mix display:



MONITOR 1
-7.8 dB
PFL In
-5.8 dB
AFL Out
+0.0 dB



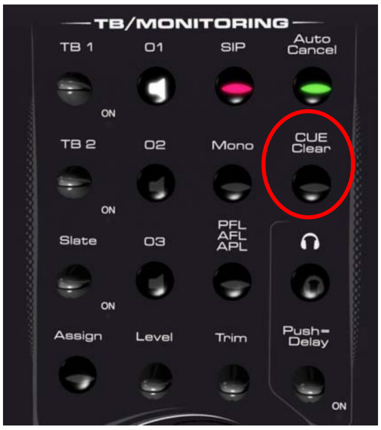
MONITOR 1
-7.8 dB
AFL In
+0.0 dB
AFL Out
+0.0 dB

Note that if the Listen mode is green, then this indicates that there are active **CUE**s. In both our examples above, **CUE** is active on an output channel (AFL Out is green).

3. When **PFL In** is selected, adjust the **Trim** control to set the PFL level for input channels.
4. When **AFL In** is selected, adjust the **Trim** control to set the AFL level for input channels.

The two levels are stored so that when you switch between cue modes, they are automatically recalled.

5. By default, **CUE** buttons on input channels are additive. To make them intercancel, turn on **Auto Cancel**.



CUE CLEAR

1. Press the **CUE Clear** button on the TB/MONITORING panel to quickly clear down any active **CUE**s.

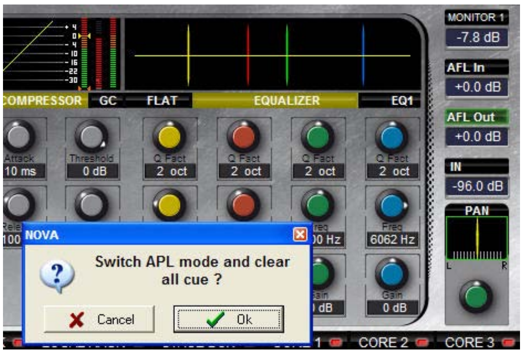
Note that the **Master if no cue** option, set from the Monitoring preferences window, prevents you from clearing the **CUE** buttons on Master channels. See Page 217 for details on Monitoring preferences.

Output Channels

On output channels, **CUE**s may operate as AFL, PFL or APL:

1. Press **SEL** on any output channel.
2. Then press the **PFL/AFL/APL** button to toggle between the three options.

A confirmation box appears before you can select APL, as this mode requires that all **CUE**s are cleared:


NOVA

Switch APL mode and clear all cue ?

3. Press **OK** to confirm or **Cancel** to stay on AFL.
4. As before, you can use the **Trim** control to set the **PFL Out**, **AFL Out** and **APL Out** levels for the different modes.

The three levels are stored so that when you switch between cue modes, they are automatically recalled.

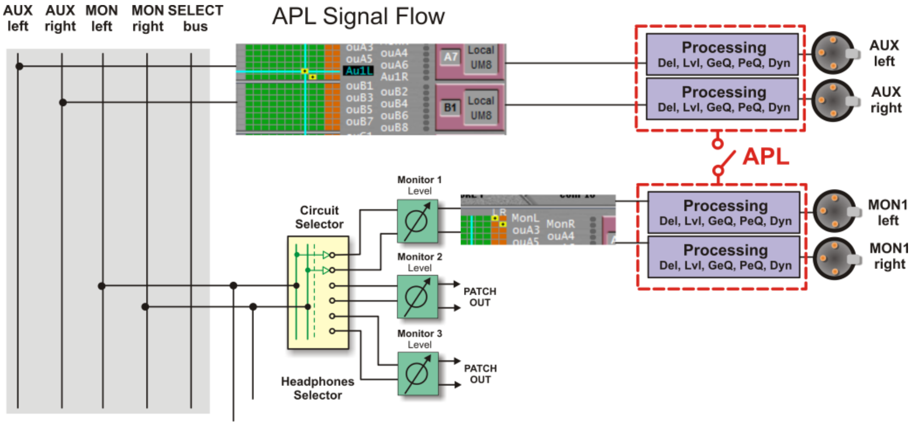
5. **CUE** buttons on output channels always intercancel.

APL (After Processing Listen)

Each mix bus which is patched to a UM-8PO output can access a full range of DSP processing provided by the card itself. APL allows you to listen to an output channel after this processing.

Note

Note that to use this feature, the monitor circuit(s) *MUST* be patched to UM-8PO outputs. This is because the system uses a clever method of “copying” the DSP parameters onto the monitor output DSP. You can see this in the diagram below:



Smart VCAs

Note that you cannot **CUE** a VCA channel.

You can select **CUE** on a Smart VCA:

1. Press **CUE** on the Smart VCA to activate **CUE** on all the slave channels.

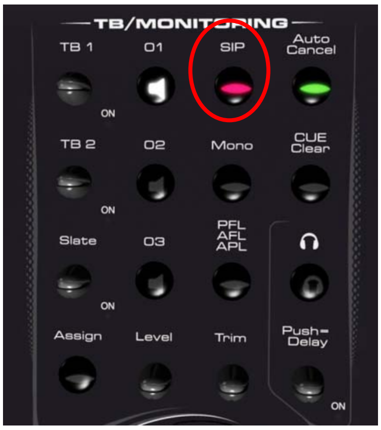
You can deselect individual **CUE** buttons from slave channels if you wish. If you do this, then you will need to deselect all slave **CUE**s before you can re-activate them from the Smart VCA master.

Solo-in-Place (SIP)

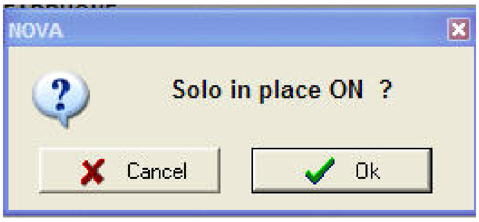
On input channels, the **CUE** button may operate as SIP (Solo-In-Place). This is a destructive solo mode which mutes all other channels feeding the Master bus, enabling you to check individual input channels through your main PA mix.

Note that you cannot Solo-in-Place an output channel; when SIP is active the **CUE** buttons on outputs have no function.

1. Turn on Solo-in-Place by pressing the **SIP** button on the TB/MONITORING panel:



A confirmation box appears:

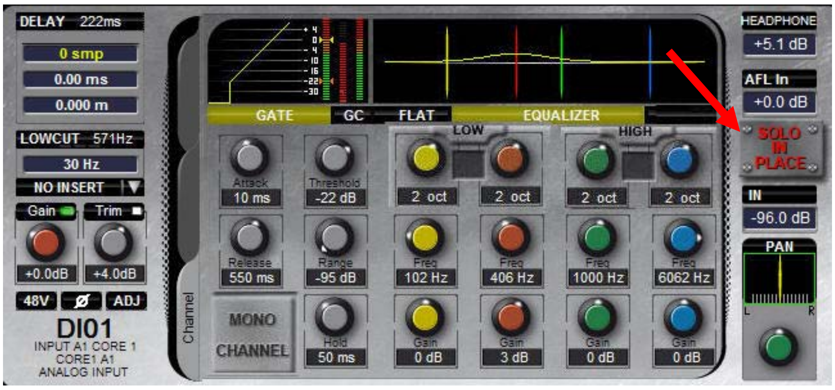

NOVA

Solo in place ON ?

2. Confirm by pressing **OK**.

Solo-in-Place is now active.

When SIP is active, the Main Mix display looks as follows:



3. You can now press **CUE** buttons to solo input channels.

Solo-in-place may work with or without **Auto Cancel**.

Tip

If you have channels which you do not want to be muted by the Solo-in-Place function (e.g. effects returns), then you can put them into “Solo Safe” mode as follows:

4. Press and hold the **CUE** button on the input channel for at least 300ms.

The CUE button flashes to indicate it is now set for “Solo Safe”.

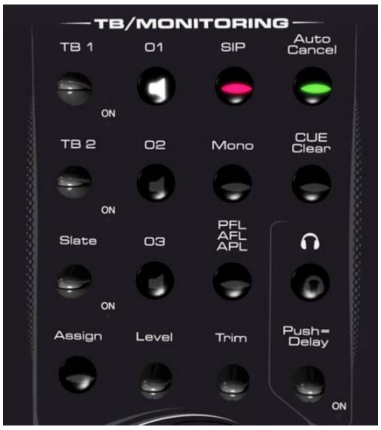
5. Now press **CUE** a different input channel.

Any channels in Solo Safe mode are not muted by the Solo-in-Place selection.

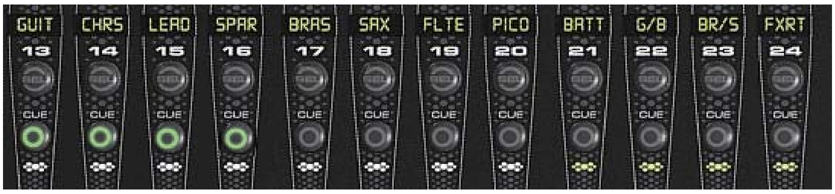
Automatic Monitor Switching

This feature allows you to configure automatic monitor switching in response to different channel **CUE**s. For example, if some musicians use wedge monitors while others use in-ears, you can setup your monitor switching to respond to the different channel **CUE**s.

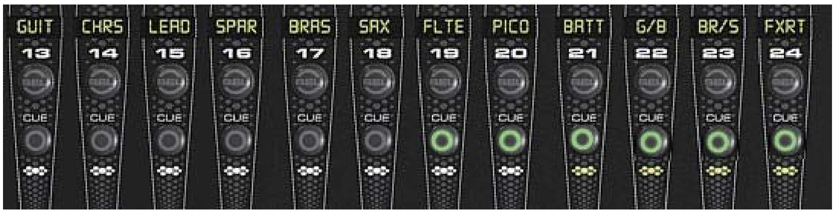
Let’s take an example of configuring automatic monitor switching on monitor outputs 1 and 2:



1. Press and hold the **01** button on the TB/MONITORING panel while you press the **CUE** buttons on the channels you wish to assign to this monitor circuit:



2. Now press and hold the **02** button, and press the **CUE**s you wish to assign to monitor circuit 2:



3. You can check which channels are assigned to each circuit at any time by pressing the **01** or **02** buttons.

All CUEs assigned to the selected circuit become active.

4. To remove a channel, press and hold the **01** or **02** button and deselect the **CUE**.

Having configured the two monitor circuits:

5. Press a **CUE** button on faders 13 to 16 and monitor circuit **01** is automatically selected.
6. Press a **CUE** button on faders 19 to 24 and monitor circuit **02** is automatically selected.

You can configure this operation for up to three monitor circuits.

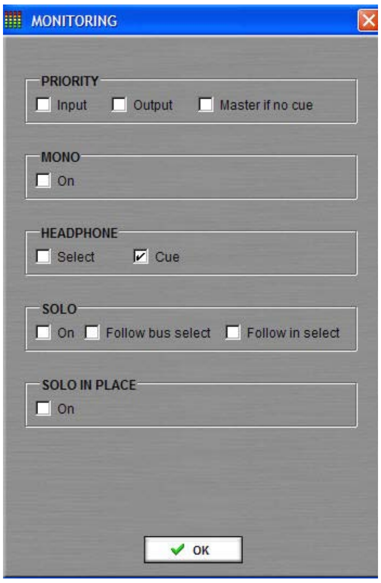
Monitoring Preferences

1. Using the trackball, select the “**UTIL -> Monitoring**” menu path to open the MONITORING window.

A switch on the User Defined panel can also be assigned to open this window, see Page 322.

The window configures the following preferences:

	MON **(USER DEFINED)**
	“UTIL -> Monitoring”
	n/a


MONITORING

PRIORITY
☐ Input ☐ Output ☐ Master if no cue

MONO
☐ On

HEADPHONE
☐ Select ☑ Cue

SOLO
☐ On ☐ Follow bus select ☐ Follow in select

SOLO IN PLACE
☐ On

⏩ PRIORITY

- **Input** – cued inputs have priority over cued outputs.
- **Output** – cued outputs have priority over cued inputs.
- **Master if no cue** – if no CUEs are active, then the Master mix bus has priority and feeds the stereo monitor bus (Master Left and Master Right).

Note that if the **Master if no cue** option is on, you cannot deselect the **CUE** buttons on the Master faders. (You can deselect Master Left or Master Right to cue one side only.)

⏩ MONO

- **On** – when ticked, this option sets the Cue bus to mono.

⏩ HEADPHONE

Selects the monitor source for the Headphone output, see Page 210:

- Tick **Cue** to receive the Cue bus.
- Tick **Select** and the Headphone circuit monitors whichever channel is currently selected (**SEL** active).

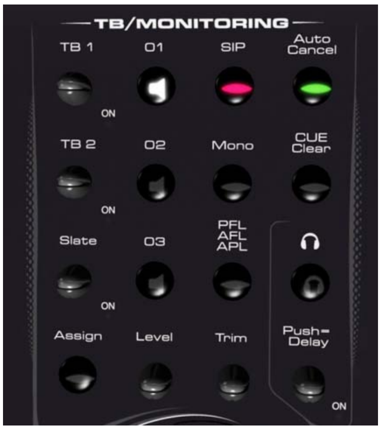
⏩ SOLO

- **On** – identical to turning on the **Auto Cancel** button on the TB/MONITORING panel.
- **Follow bus select** – when ticked, the monitor bus receives whichever bus is currently selected (**SEL** active).
- **Follow in select** – when ticked, the monitor bus receives whichever input channel is currently selected (**SEL** active).

⏩ SOLO IN PLACE

- **On** – identical to turning on the **SIP** button on the TB/MONITORING panel.

Talkback



Eclipse provides three talkback controls on the TB/MONITORING panel which can be used to talk to three different destinations:

- **TB1**
- **TB2**
- **SLATE / TB3**

The operation of each is identical:

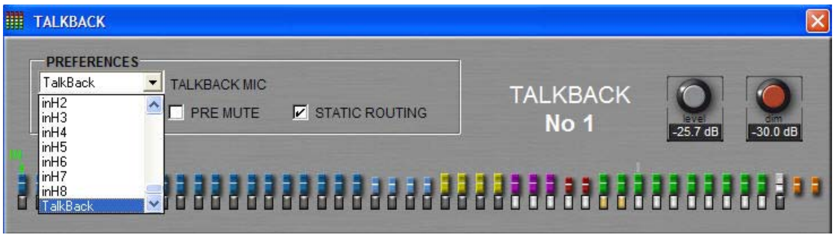
1. Press down on the rotary control to activate talkback to your chosen destination.

Note that talkback is momentary; for safety, you cannot latch on talkback so keep holding down the control to talk.

2. Turn the rotary control to adjust the talkback level.

You can prepare the talkback microphone source, and destination channel, from the Nova touch-screen as follows:

1. Whilst holding a control (e.g. **TB1**) the Talkback Preferences window appears:



TALKBACK MIC: TalkBack
☐ PRE MUTE
☑ STATIC ROUTING

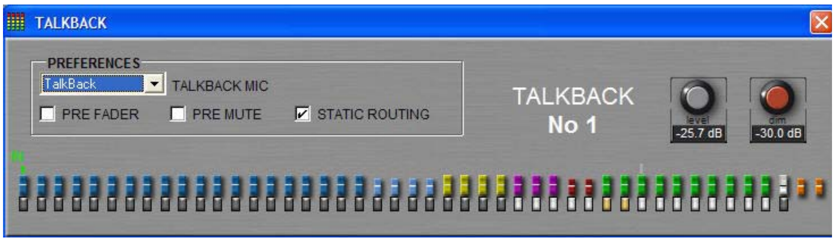
2. Select a talkback source from the drop-down menu.

By default, the engineer talkback XLR at the front of the console is selected (**Talkback**). However, you can choose any microphone input connected to a local mic card fitted at the rear of the console.

To set the gain for a local microphone input, or select 48V, use the input Adjust controls on the **PATCH INPUT** or PATCH **DIRECT** displays.

3. Press **SEL** on the mix busses you wish to talk to.

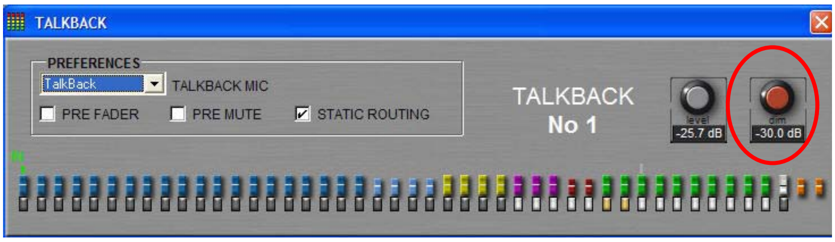
In our example, we have selected two Auxes:



TALKBACK MIC: TalkBack
☐ PRE FADER
☐ PRE MUTE
☑ STATIC ROUTING

You can select as many Aux, Group, Master and Matrix busses as you wish. You cannot inject talkback to an input or VCA!

4. Turn the **Level** rotary control (normally monitor level), to adjust the **Dim** level.


TALKBACK

PREFERENCES

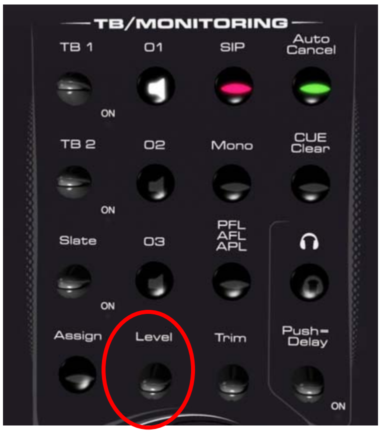
TalkBack TALKBACK MIC

☐ PRE FADER ☐ PRE MUTE ☑ STATIC ROUTING

TALKBACK No 1

level -25.7 dB

dim -30.0 dB



This sets the amount of attenuation applied to the mix bus when talkback is injected.

5. Set the Talkback preferences as follows:

You can select any or all of these options:

- **PRE FADER** – Talkback is injected pre-fader. This allows you to talk to busses even if one or several faders are closed. For example, an audience announcement would still be possible even if the faders are closed.
- **PRE MUTE** – Talkback is injected pre-mute. For example, if you have muted an Aux feeding a wedge on stage, you can still talk to the musician using this wedge.
- **STATIC ROUTING** – By default, this option is activated so that any busses selected for **TB1**, **TB2** and **SLATE** are remembered. This means each time the control is pressed, the prepared routing is recalled and immediately active. Uncheck this box if you wish to have a blank Talkback routing configuration each time you press a talkback control.

6. As soon as you release the **TB 1** control, talkback is cancelled and the **Level** control returns to monitor level.

Chapter 6: Console Configuration

Introduction

This chapter covers the operations required to build your own console configuration:

- **The Personal Console Builder** – Fader strip and Smart Panel assignments, Page 221.
- **Patching** – the PATCH IN, PATCH OUT and PATCH DIRECT displays, Page 230.
- **Internal Effects (FX)** – Page 289.
- **Inserts** – Page 309.
- **The Fast Configuration Window** – Page 318.
- **The User Defined Panel** – Page 322.

Note that many Nova displays (**PATCH IN**, **PATCH OUT**, **LINK**, **RELAX**, etc.) are grid-type displays. They all behave in a similar manner, therefore once you understand one you will feel comfortable operating the others. For an example of how to work with any grid display, see the **PATCH IN** on Page 231.

The Personal Console Builder

Overview

This display is used to assign different channel types (inputs, Auxes, VCAs, etc.) to the 48 Faders strips and Smart Panel. It is also where you determine whether each mix bus (Aux, Group, Master and Matrix) is mono, stereo LR or stereo LRC.

The PCB configuration is stored each time you save a File. However, you cannot store different PCB configurations in Pages. If you wish to load different Fader strip or Smart Panel assignments during a show, save a File for each configuration.

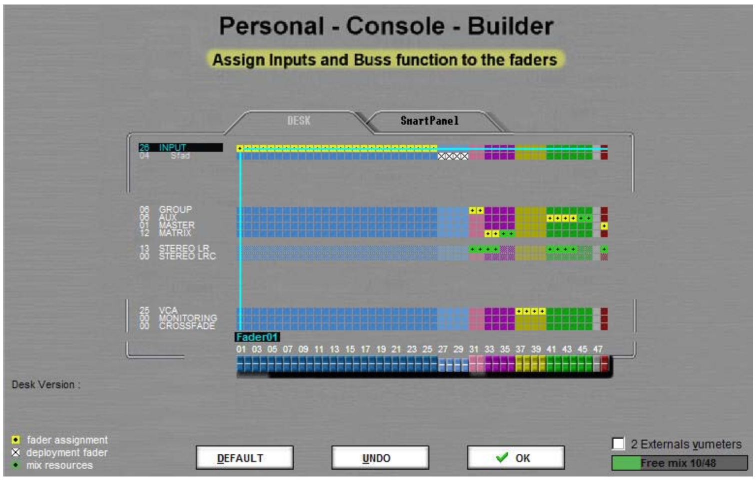
Note

	PCB **(USER DEFINED)**
	“UTIL -> Personal Console Builder”
	[ALT] + [C]

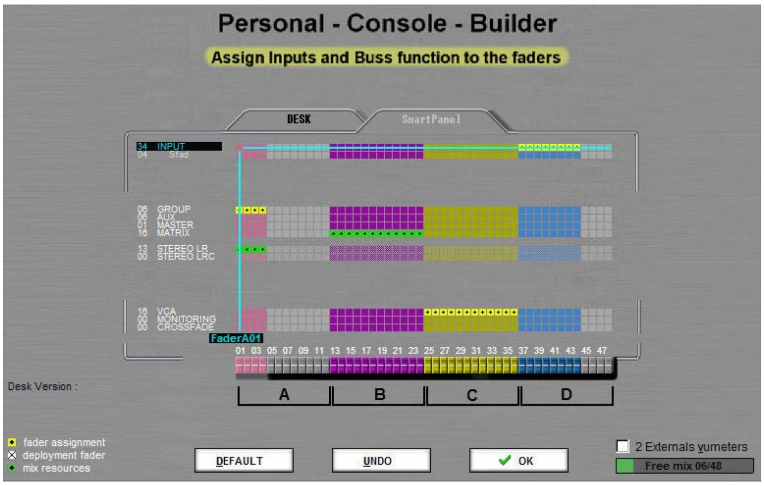
1. Select “**UTIL -> Personal Console Builder**”.

A switch on the User Defined panel can also be assigned to open this window, see Page 322.

*The grid shows the assignments of channel types (on the left) to the **DESK** faders or **Smart Panel** controllers (at the bottom):*



2. Click on the **DESK** and **SmartPanel** tabs to switch view:

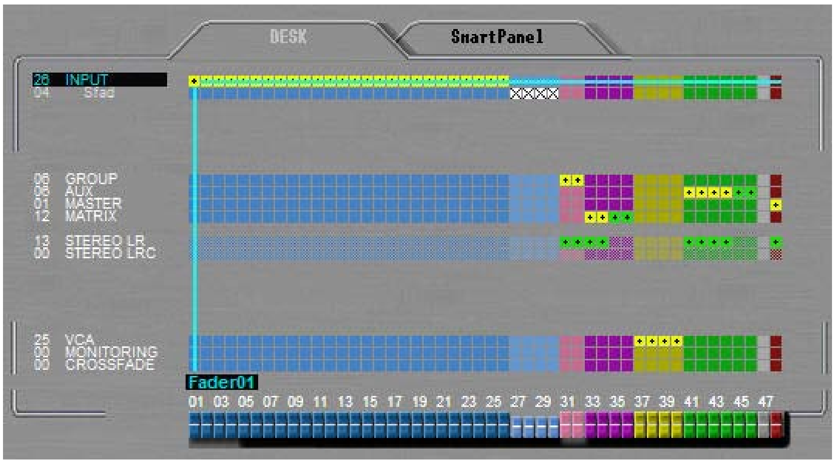


The Smart Panel controllers are represented as 48 “faders”; the A, B, C and D markers represent the four layers of controls.

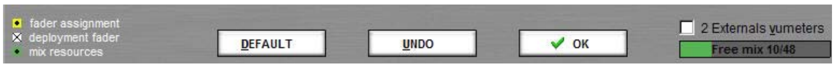
The faders at the bottom of the display are colour coded to help you distinguish inputs (blue) from Smart Faders (light blue), Groups (pink), Matrices (violet), VCAs (yellow), etc. For a full list of colours, see Page 58. If a fader is not assigned, then it is grey.

Within the grid itself, the following assignment colours are used:

- Fader assignments are marked by a yellow box 🟨
- Deployment faders (Smart Faders) are marked by a black and white box ☒
- Mix bus resources are marked by a green box 🟩



On the lower left of the display there is a key to this coding:



On the lower right, you will see the mix bus resource counter – **Free mix 10/48**. This shows the number of mix busses still available; in our example, we have 10 free busses:

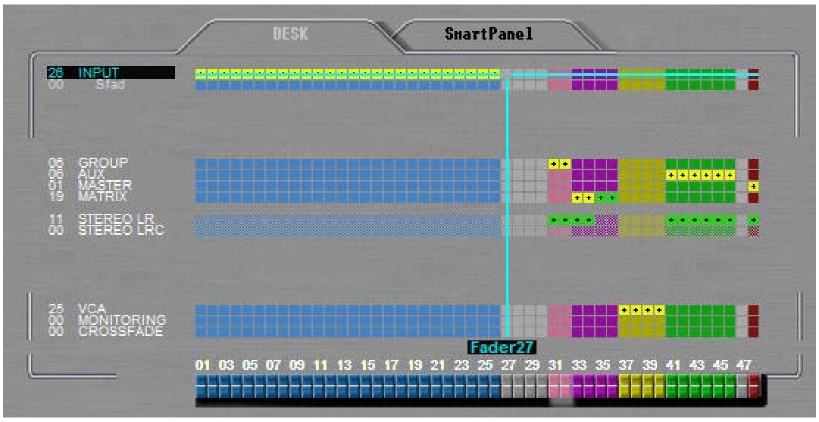
Above this a tick box can be used to reserve two mix bus resources for external VU metering. See Page 229.

The three on-screen buttons perform the following functions:

- **DEFAULT** – loads a default configuration. This is factory configured and cannot be modified by the user.
- **UNDO** – will undo any changes made in this visit.
- **OK** – loads the displayed configuration to the console.

Making Fader Assignments

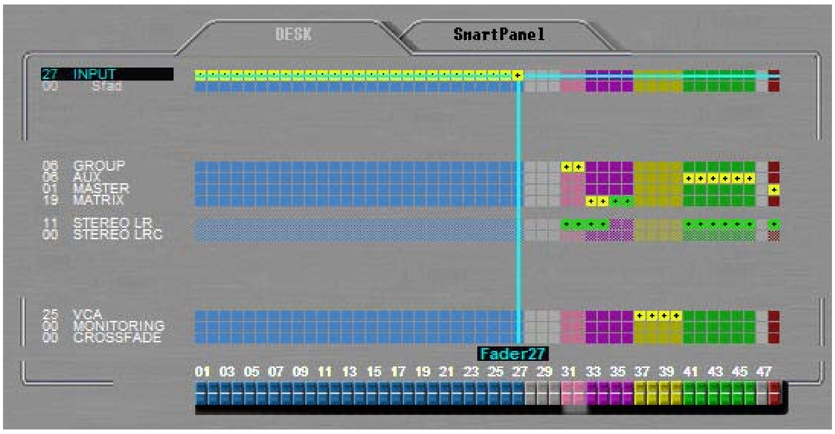
1. Position the cursor over the assignment box – for example, to assign an INPUT to Fader 27:



- You can press the **SEL** button on the Fader strip.
- Then use the up and down arrows on the console keyboard to select the channel type.

Tip

2. Then press the [**SPACE bar**] on the console keyboard:



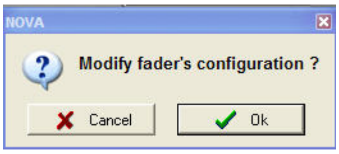
3. To remove an existing assignment press the [**SPACE bar**] again.

The assignment is removed; this will create an empty Fader strip on the console surface once the configuration is loaded.

Note that the console does not update when you modify the PCB display. You must first create your configuration and then load it to the console as follows:

4. Press **OK**.

A confirmation pop-up asks you to confirm the load.



Modify fader's configuration ?

5. Confirm by pressing **OK** again.

The fader configuration is loaded to the console and the PCB display closes. The configuration will overwrite any existing fader assignments, so be sure before you confirm!

To explain the different fader types, let's take some examples.

Configuring Inputs

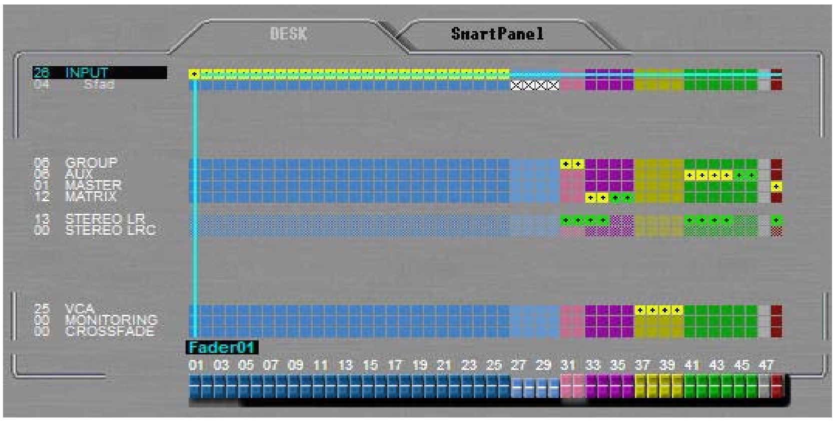
The **Personal Console Builder** allows you to configure two types of input fader:

- **INPUT** – this will become either an input channel (mono or stereo), or a Smart Fader VCA (a fader which will control a number of Smart Fader slaves).
- **Sfad** – this is a Smart Fader slave (deployment fader).

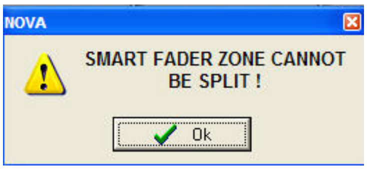
Note

Note that **INPUT** faders are not turned into direct control input channels, or layered Smart Fader channels, until you patch sources from the **PATCH IN** display. This means that you *only* use input channel DSP resource once you make a patch.

To work with Smart Faders, you *must* configure a number of **Sfads**; in our example, faders 27 to 30:



The Smart Fader zone must use contiguous faders and only one zone is allowed. If you attempt to configure a non-contiguous zone, then the following pop-up will appear:


NOVA

SMART FADER ZONE CANNOT BE SPLIT !

If you want to move the **Sfad** zone, then you will need to remove any existing **Sfad** assignments first.

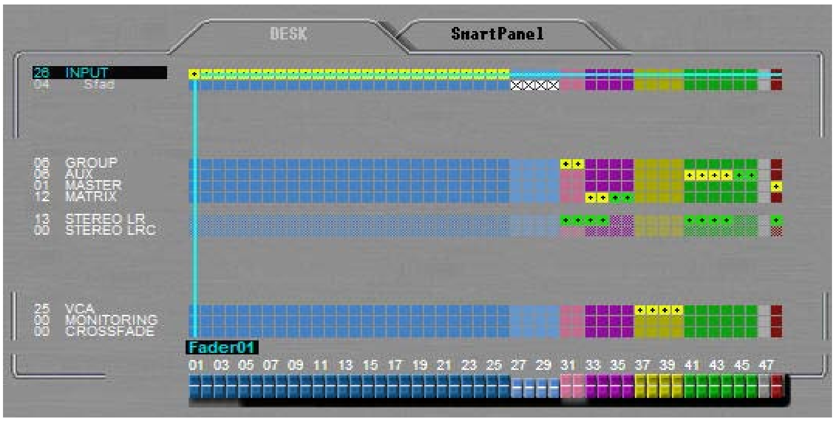
Make sure you configure enough **Sfads** to deploy your widest Smart Fader VCA – for example, if you want Smart Fader control over the Toms from a drum kit, then you will need enough **Sfads** to deploy the individual Tom mics!

Please see Page 149 for an overview of Smart Faders and their operation.

See Page 235 for details on patching sources to input faders.

Mix Bus Configuration

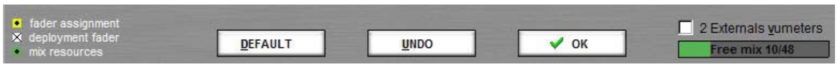
Each of **Eclipse**'s 48 mix busses may be configured as an Aux, Group, Master or Matrix, and each bus may be mono, stereo LR or LRC. This configuration is made by assigning a mix bus channel to a fader, and then determining its format:



In our example:

- Faders 31 and 32 are stereo LR Groups (pink)
- Faders 33 and 34 are stereo LR Matrices (violet)
- Faders 35 and 36 are mono Matrices (violet)
- Faders 41 to 44 are stereo LR Auxes (green)
- Fader 48 is the stereo Master (red)

Each time a bus is assigned, the mix bus resource counter updates – in our example, we have 10 free busses remaining:

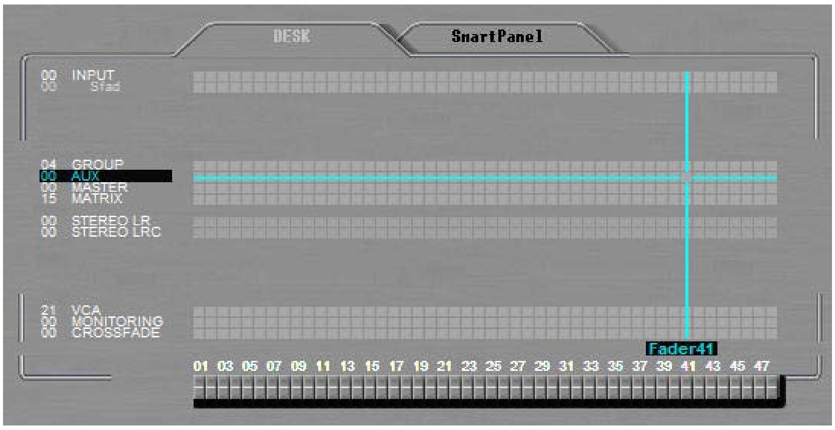


Please see Page 159 for an overview of the different bus types.

Bus Assignments

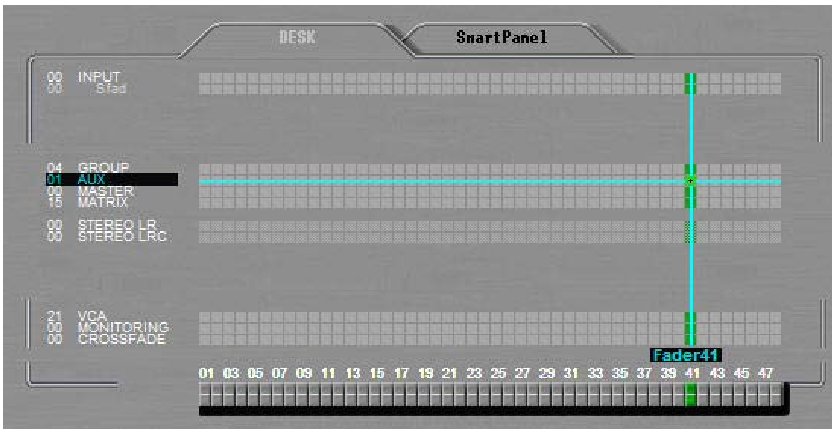
To assign a mix bus to a Fader strip or Smart Panel controller:

1. Select the **GROUP**, **AUX**, **MASTER** or **MATRIX** channel type:



2. Press the [**SPACE bar**] to make the assignment.

The system assigns a mono mix bus resource to the fader. The assignment is represented by a green box 🟩 *as it uses a single mix bus DSP resource:*



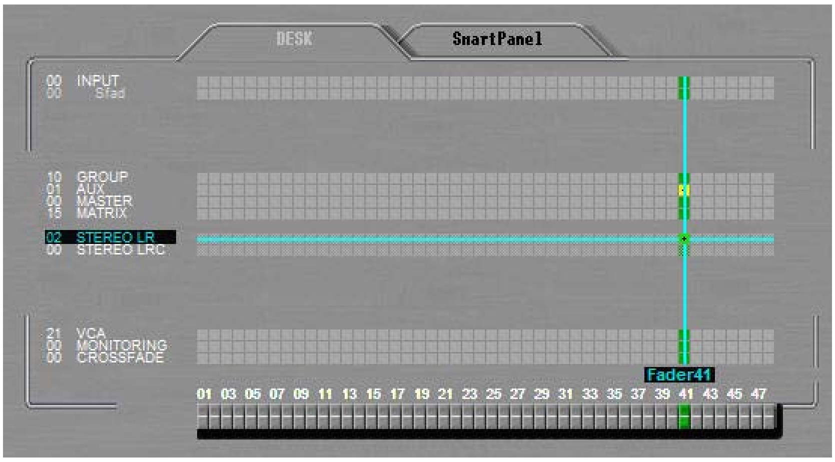
Note

Note that when you assign a Master, the system automatically assigns a stereo LR Master (using 2 mix bus resources). You can change the format to mono or LRC as described on the next page.

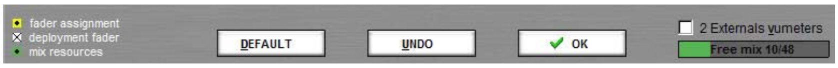
To change the format of the bus assignment:

3. Cursor down to the STEREO LR or STEREO LRC row and press the [**SPACE bar**].

The assignment updates to the chosen format – in our example, to stereo LR. Stereo bus assignments are represented by a yellow box ▣ *to indicate that they use multiple bus resources:*



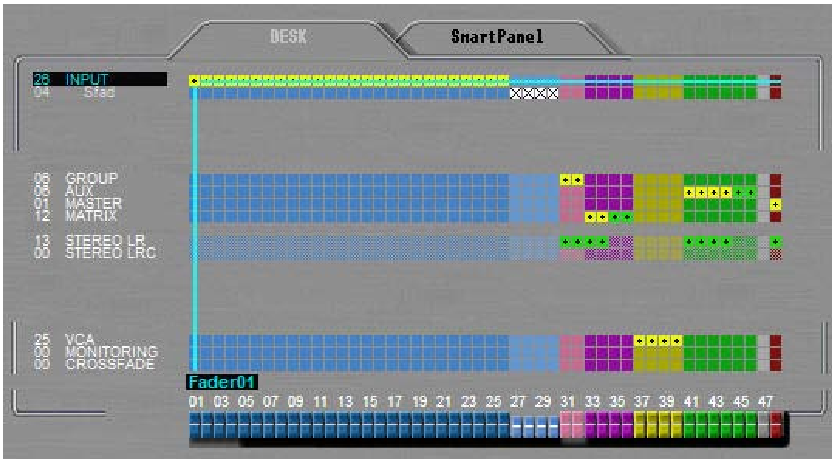
Notice that the mix bus resource counter decreases according to the selected format:



A stereo LR bus uses 2 mix resources; a stereo LRC bus uses 3 mix resources.

4. To return a bus to mono, remove the STEREO LR pr STEREO LRC format assignment.

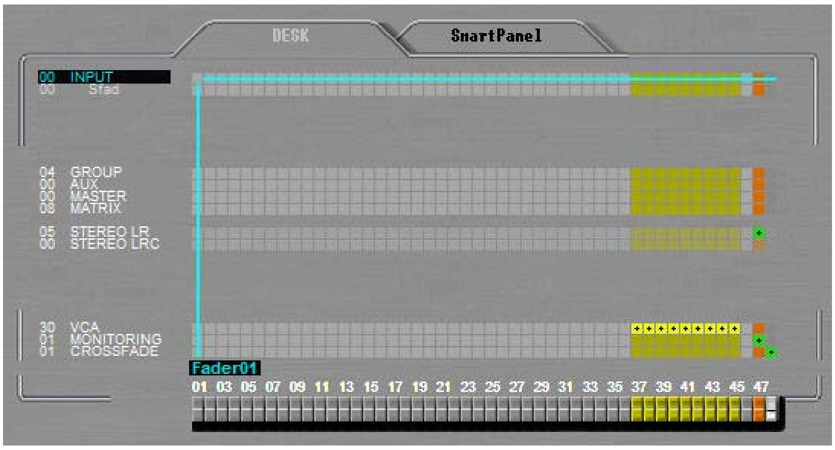
5. Repeat for all the busses you wish to configure:



See Page 249 for details on patching mix busses to physical outputs.

Other Channel Types

The **Personal Console Builder** can assign three other channel types as follows:



00 INPUT
00 Sfad
04 GROUP
00 AUX
00 MASTER
08 MATRIX
05 STEREO LR
00 STEREO LRC
30 VCA
01 MONITORING
01 CROSSFADE

- **VCA** – a VCA master (yellow). See Page 193.
- **MONITORING** – a stereo monitoring fader (orange). This fader will control the level of the selected monitor output (01, 02 or 03). See Page 209.
- **CROSSFADE** – (white). This fader will control the transition time between Pages when using automation. See Page 378.

You can assign as many VCA masters as you like.

Note

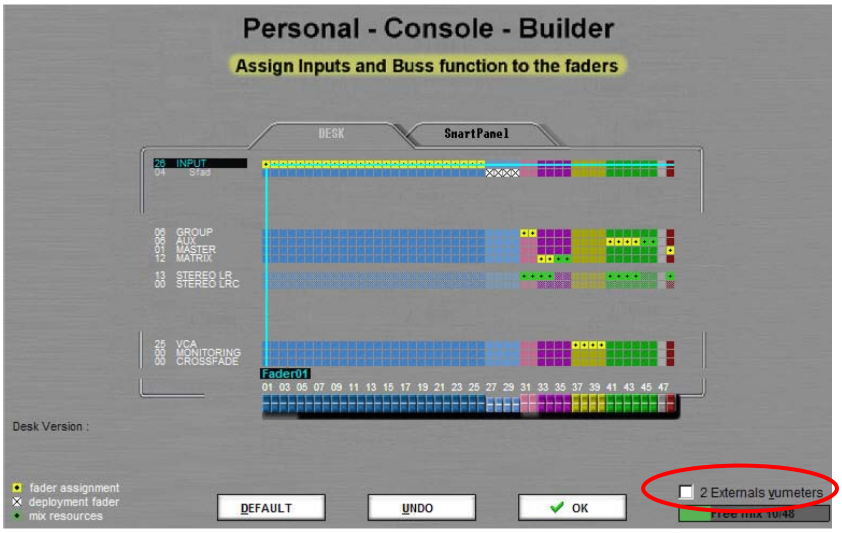
Only one **MONITORING** and one **CROSSFADE** fader may be assigned at a time. The Monitoring fader is always stereo LR.

External VU Meter Feed

For some applications, such as live broadcast, you may wish to connect an External VU meter which will follow the stereo Monitor bus but be pre any monitoring level, AFL level, PFL level, etc.

Note that this function uses two mix bus resources.

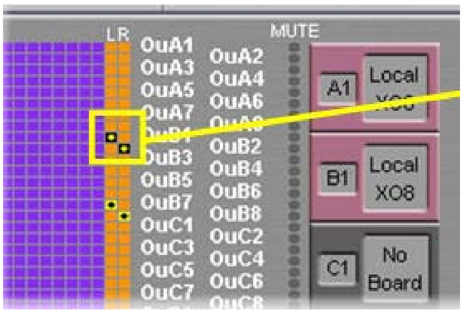
The **2 Externals vumeters** checkbox, at the lower right of the Personal Console Builder, reserves the two mix busses for the follow monitor VU meter feed:



1. Tick the checkbox on the Personal Console Builder and load the configuration by pressing **OK**.

2. Then open the **PATCH OUT** grid, see Page 247.
3. Select the left monitor fader (orange) and the physical output feeding the left VU meter.
4. Press [**v**] on the console keyboard to patch the VU (follow monitor) mix bus to the selected output:

ECLIPSE	**Patch OUT (UTILITIES)**
	"GRID -> Patch Output"
	[F12]

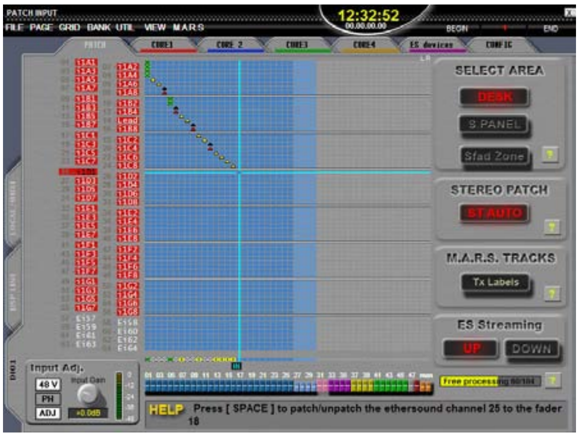


The patch point uses a yellow dot on a black box to distinguish it from a normal monitor output patch (black dot on yellow box).

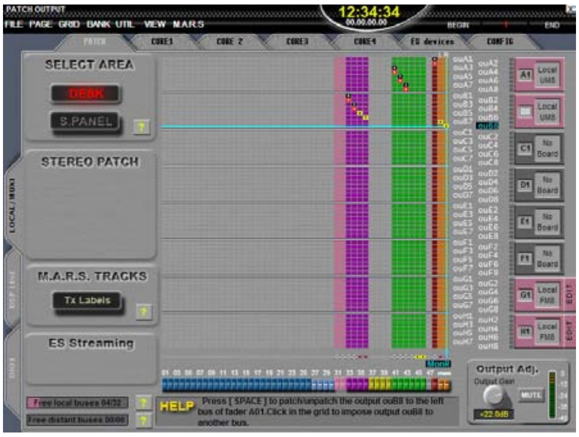
5. Repeat steps 3 and 4 to patch the right meter feed.

Digital Patching

Eclipse includes a digital patch accessible from the Nova **PATCH INPUT**, **PATCH OUTPUT** and **PATCH DIRECT** grids:



Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18



Press [SPACE] to patch/unpatch the output ouB8 to the left bus of fader A01.Click in the grid to impose output ouB8 to another bus.

All three displays are similar in operation:

- **PATCH INPUT** – patches physical sources to channels. For example, to patch a microphone from the DioCore to an input fader.
- **PATCH OUTPUT** – patches output channels (mix busses) to physical destinations. For example, to patch an Aux to a monitor wedge.
- **PATCH DIRECT** - allows patching of physical sources directly to physical destinations. For example to feed a microphone input to an AES output for recording.

Inputs and outputs may be local (at the rear of the console) or remote (in a DioCore or Muxipaire Stagebox). And multiple consoles and/or DioCores may be networked in order to share I/O resources.

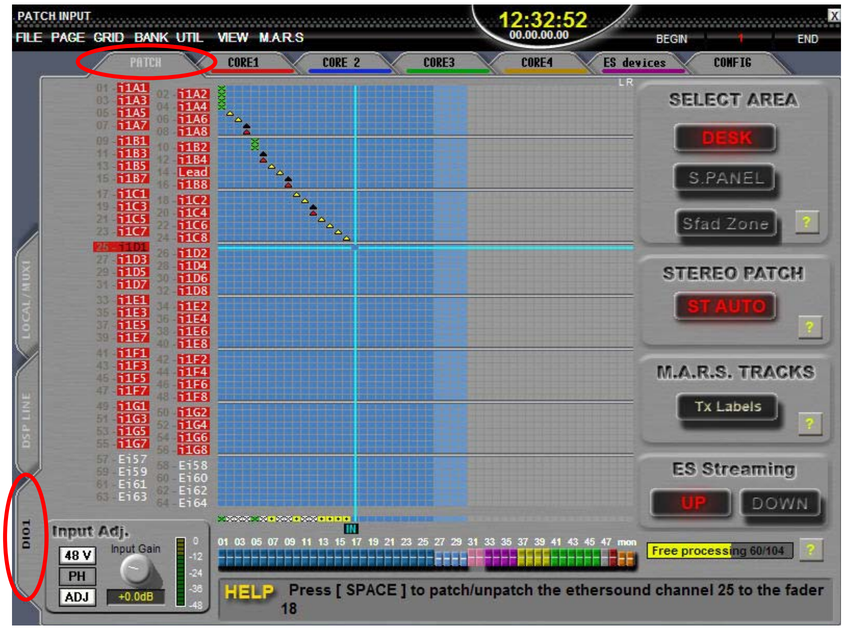
Perhaps the most important feature of the digital patch is that all crosspoints are stored and recalled. This reduces any manual patching to the absolute minimum and allows you to recall the same show at a new venue within seconds!

This section deals with each of the **PATCH** grid displays, including how to patch and name inputs and outputs, and configure multiple DioCores and other Ethersound devices in an Ethersound Network.

The Patch Input Display

1. Select the **PATCH INPUT** display by pressing the **PATCH IN** button on the UTILITIES panel.
2. And make sure that the **PATCH** and **DIO1** tabs are selected:

	Patch IN **(UTILITIES)**
	“GRID -> Patch Input”
	[F11]

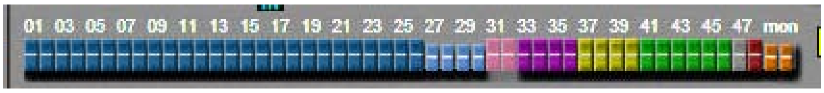


Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

This grid is used to patch Ethersound channels (on the left) to input faders (at the bottom).

The Ethersound channels are colour coded to show their origin: red for sources from DioCore 1, blue for sources from DioCore 2, and so on. If the Ethersound channel has no source, then it is white. The colour coding follows the **CORE** and **ES devices** tab colours at the top of the display. See Page 263 for more details on preparing the Ethersound network.

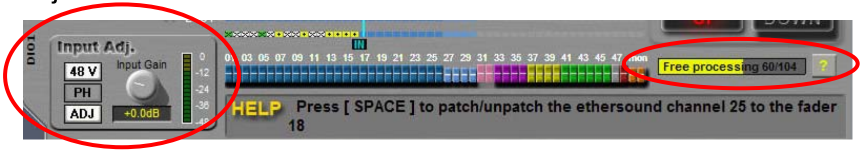
At the bottom of the display, the colour coding of the faders shows their channel type (inputs, VCAs, Auxes, etc.):


01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 mon

Mono connections are indicated by a yellow triangle △ within the grid. Stereo connections are indicated by black and red triangles for left and right. Connections made to a Smart Fader VCA are indicated with green boxes ☒.

Note that some parts of the grid are light (patching allowed) and others are dark (patching not allowed). This is because the **PATCH INPUT** grid is *only* used to connect sources to input channels. Therefore, if a fader is assigned to a mix bus or a VCA, there is no input patch available.

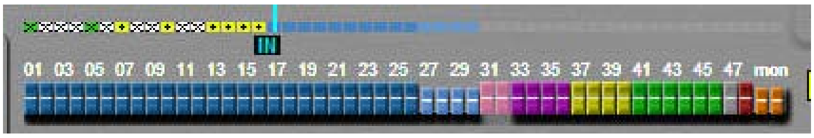
At the bottom of the display, the **Input Adj** screen controls adjust and meter the selected source:



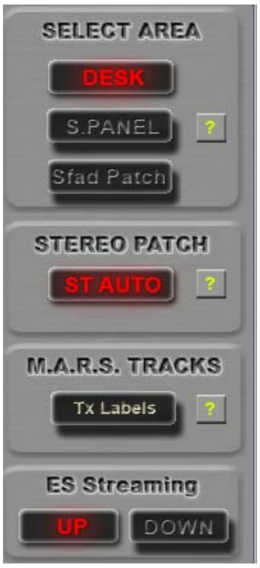
Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

Also at the bottom of the display is the **Free processing** resource counter. This shows the number of input DSP channels available.

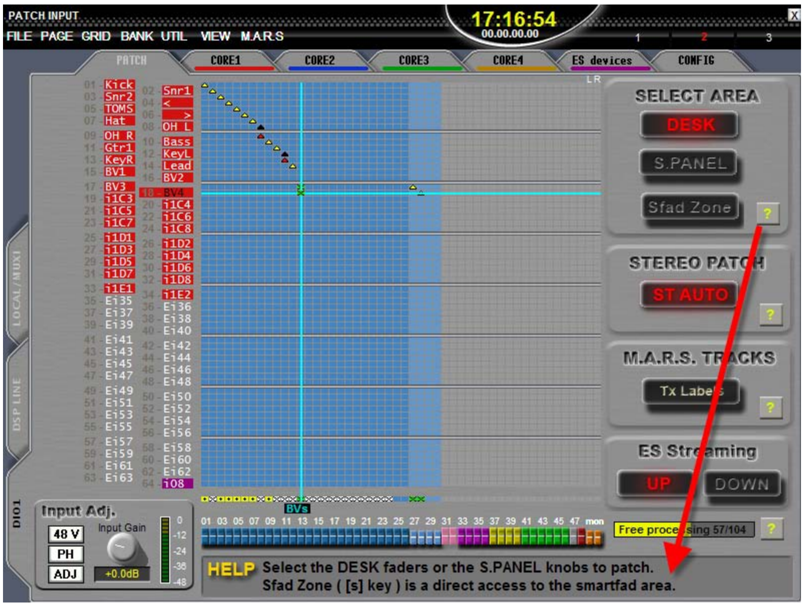
The input DSP resource is also represented by a row of boxes above faders 01 to 48:


IN
01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 mon

- Yellow = a mono input channel.
- White with a cross = a stereo input channel.
- Green with a cross = a Smart VCA (controlling multiple input channels).
- Grey = no input DSP resource.



On the right are a number of on-screen buttons: SELECT AREA, STEREO PATCH, M.A.R.S. TRACKS and E.S. Streaming. You can interrogate the function of each by clicking on the yellow question mark; the **HELP** area updates accordingly:



Select the DESK faders or the S.PANEL knobs to patch.
Sfad Zone ([s] key) is a direct access to the smartfad area.

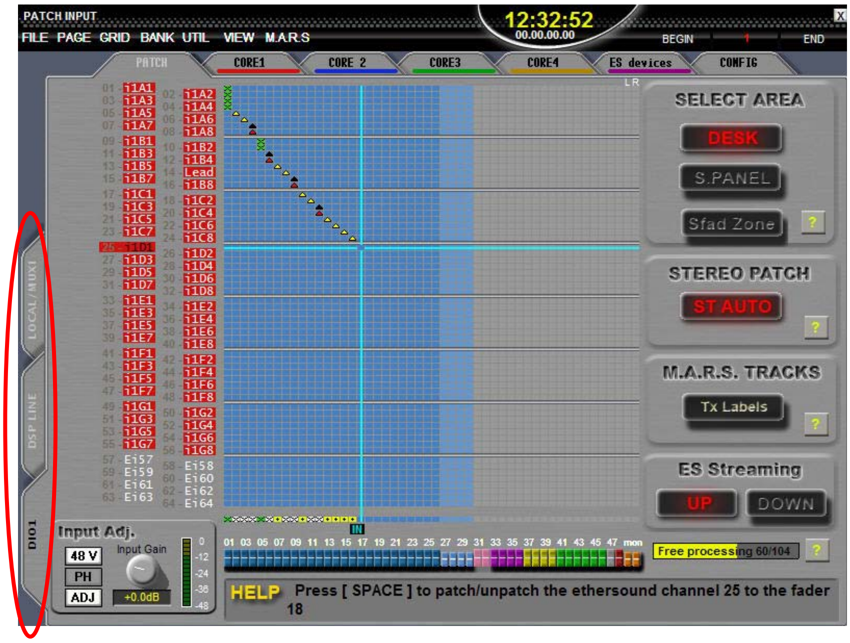
Tip

The **HELP** area is available on all **PATCH** displays and provides useful instructions on how to perform the next operation, or on an interrogated function.

PATCH Tabs

Side Tabs

The three tabs on the left of the display allow you to choose different categories of system sources:



Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

- **LOCAL / MUXI** – this tab accesses the Muxipaire inputs. In a standard Eclipse system, these are inputs on I/O cards fitted at the rear of the console. If a remote Stagebox is added, then the MUXI tab will access local and remote Muxipaire I/O cards.
- **DSP LINE** – this tab accesses the 16 line level inputs on the DSP card at the rear of the console.
- **DIO1** – this tab accesses the 64 Ethersound channels (connected to the Ethersound interface on the Sy80 DSP card at the rear of the console).

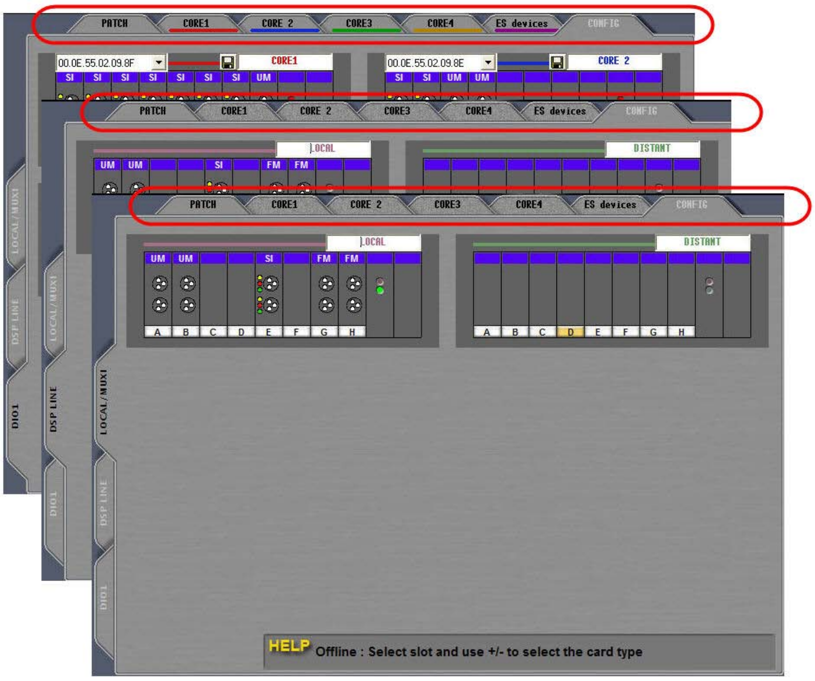
Note that not all options on the right of the display apply to every source type. For example, E.S. Streaming is only relevant to Ethersound channels, and therefore the buttons disappear if you select either the **LOCAL / MUXI** or **DSP LINE** tabs.

Note

Also note that within the **DIO1** grid, the triangles ▲ indicate the Ethersound streaming direction. However, if you make a patch within the **DSP LINE** or **LOCAL / MUXI** grids, then a box ▣ indicates the patch point. You can find more details on Ethersound networks on Page 263.

Top Tabs

The tabs at the top of the display vary depending on the I/O category selected:



Offline : Select slot and use +/- to select the card type

1. Select **DIO1** and the top row of tabs show devices on the Ethersound network:

The **Core 1**, **Core 2**, **Core 3**, **Core 4** and **ES Devices** tabs access additional grids where you can patch inputs from any DioCore, or Ethersound device, to the Ethersound channels 1 to 64.

The **Config** tab allows you to configure the Ethersound network. See Page 263 for more details.

2. Select **LOCAL / MUXI** or **DSP LINE** and these tabs become unavailable as they are no longer relevant.

The **Config** tab now allows you to configure the I/O cards in the Muxipaire interface. These could be Local cards at the rear of the console, or Distant cards in a remote StageBox. See Page 285 for more details.

Tip

Switches on the User Defined panel can be assigned to cycle through the side and top tabs, see Page 322.

Input Patching

Input DSP resources are assigned when you patch a source to a fader. In addition, stereo channels are created when you patch two sources to the same fader. This allows you to decide whether channels are mono or stereo as you patch.

To patch a source to a fader:

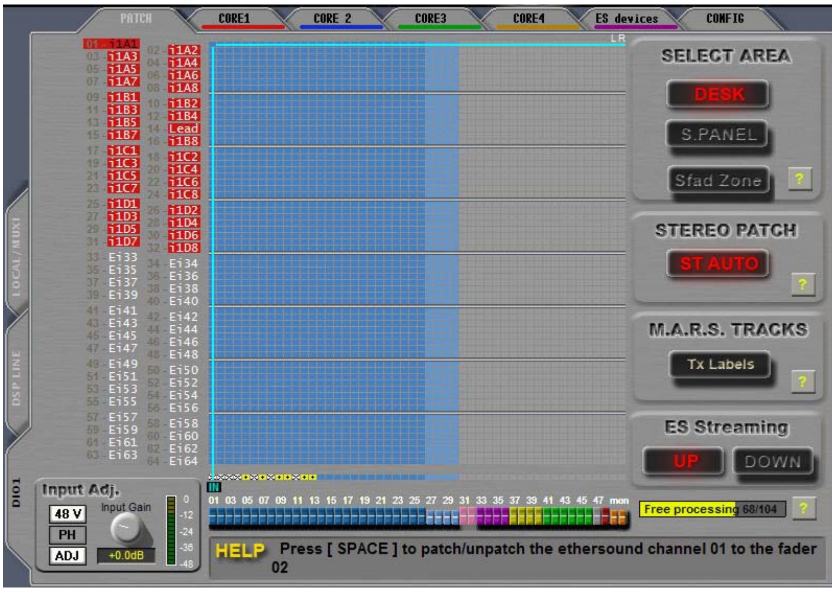
1. Select the **PATCH** tab at the top of the **PATCH INPUT** display.
2. And select a source category from the left of the display:

- **LOCAL / MUXI** = the Muxipaire inputs.
- **DSP LINE** = 16 line level inputs (rear of console).
- **DIO1** = the 64 Ethersound channels.

Note

Note that if you select **DIO1**, you will need to assign which DioCore inputs, or other Ethersound devices, feed the 64 channels of the Ethersound network. See Page 263 for details.

*In our example we have selected **DIO1** to patch Ethersound channels (from Core 1) to input channels on the console:*



Press [SPACE] to patch/unpatch the ethersound channel 01 to the fader 02

3. Now select an area of the console from the SELECT AREA buttons on the right of the display:

- **DESK** = Faders 1 to 48.
- **S. PANEL** = Smart Panel controllers 1 to 48.

Note that the **SFAD** option is used with Smart Fader patching, see Page 242.

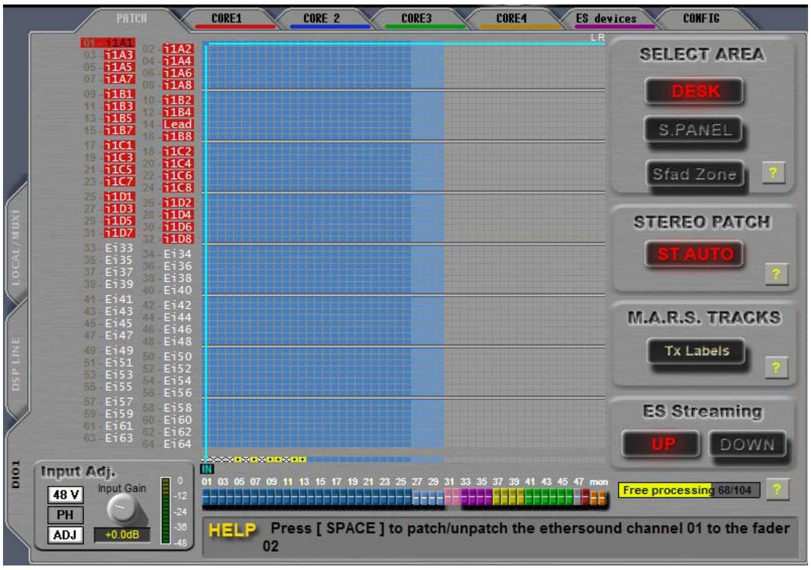
4. If you have selected the **DIO1** source tab, then select the Ethersound streaming direction from the E.S. Streaming buttons:

- **UP** = upstream
- **DOWN** = downstream

Note Note that the direction you choose depends on the configuration of your Ethersound network. In a standard Eclipse network, you should choose **UP** within this grid.

5. Now position the cursor over the desired crosspoint – for example, Ethersound channel 1 to Fader 01:

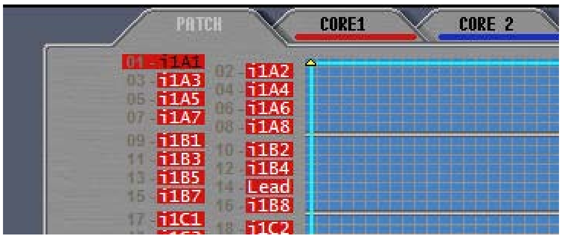
- You can select the channel by pressing its **SEL** button.
- Then use the up and down arrows on the console keyboard to select the source.



HELP Press [SPACE] to patch/unpatch the ethersound channel 01 to the fader 02

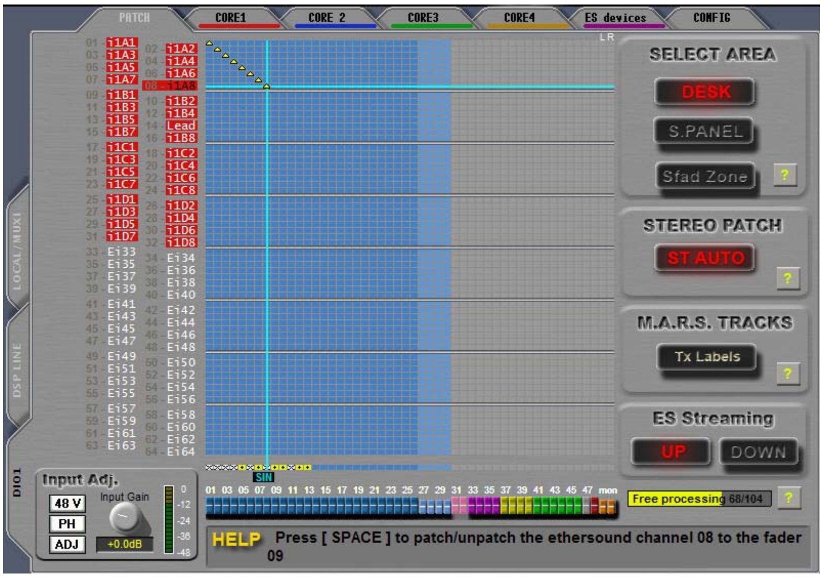
6. Press the [**SPACE bar**] on the console keyboard, or right-click, to make the patch.

A yellow triangle confirms that the patch is made and shows the Ethersound streaming direction (up or down):



If this is the first time you have patched the input fader, then the system assigns a mono input channel resource and the Free processing counter reduces by one.

7. Repeat these steps to patch more mono sources – in our example, we have patched the first 8 sources to Faders 1 to 8:



Press [SPACE] to patch/unpatch the ethersound channel 08 to the fader 09

The **Free processing** counter reduces after each patch is made, and the row of yellow boxes, above the faders, shows that a mono input DSP resource is assigned.

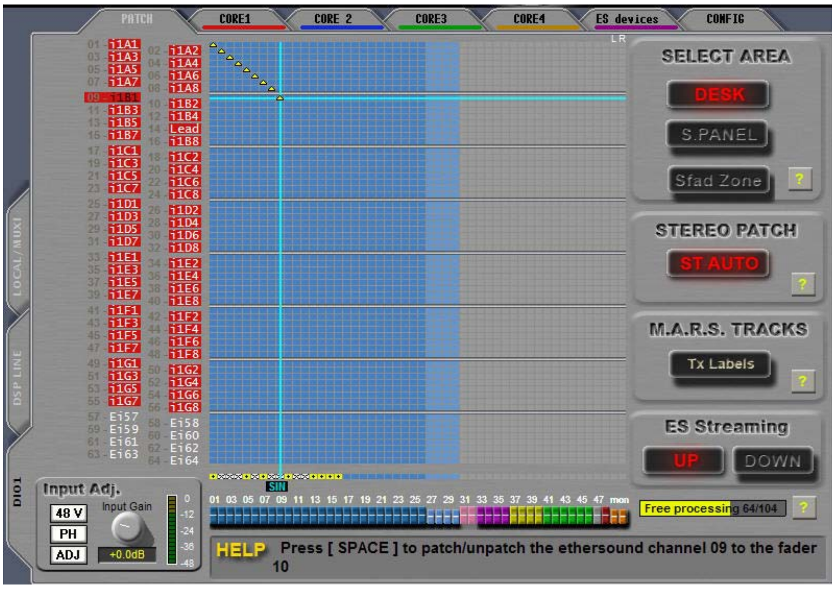
8. To remove an existing patch, position the cursor and press the [**SPACE bar**] or right-click again.

Stereo Input Patching

To create a stereo channel:

1. Repeat steps 1 to 6 from the previous section to patch the left input.

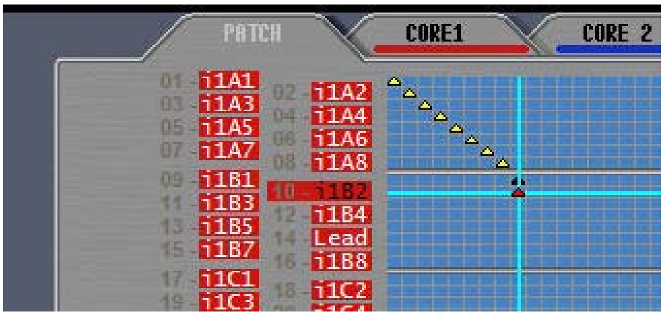
A mono patch is made:



Press [SPACE] to patch/unpatch the ethersound channel 09 to the fader 10

2. Now check that the STEREO PATCH option on the right of the display is set to **ST AUTO**.
3. With the same fader selected, position the cursor to select the source for the right input.
4. Press the [**SPACE bar**] on the console keyboard, or right-click, to make the patch.

Making a second patch to the same Fader (or Smart Panel controller) updates the channel to stereo. The **Free processing** counter reduces by an extra channel, and the crosspoints update to black and red indicating the left and right connections:



Note

Note that the STEREO PATCH option must be set to **ST AUTO** to allow automatic creation of stereo channels. If this option is set to **MONO**, then making a second patch to the same fader replaces the existing patch.

Patching Tips

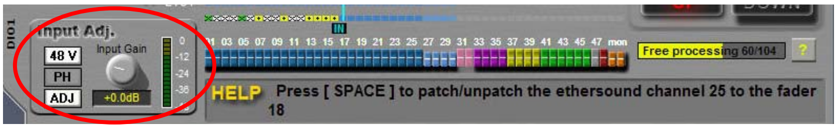
The following tips make patching on Eclipse quick and easy:

Tip

- Use the **ST AUTO** option to quickly configure mono and stereo channels as you patch.
- To make consecutive mono patch points, press [**SHIFT**] on the console keyboard and click and drag diagonally across the grid.
- You can assign rotary controls on the User Defined panel to select the x-axis and y-axis within the patch grid. Switches may be assigned to action crosspoints or edit labels. See Page 322 for details.
- If you have a mono channel which is already patched and labelled (e.g. OH L), and you turn it into a stereo channel, then the Label updates to SIN for stereo input. Use [**F3**] to edit the stereo FADER Label.

Controlling Input Parameters

At the bottom of the **PATCH INPUT** display, the **Input Adj** controls adjust and meter the selected source:



Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

- **Input Gain** – left-click to increase or right-click to decrease the gain. Or press [**F5**] or [**F6**].
    - For analogue sources, you are adjusting the mic preamp gain in 1.5dB steps.
    - For digital sources, you are adjusting the digital trim level in 0.1dB steps.
- **48V** (SDI-8 cards only) – left-click to turn on/off phantom power. Or press [**F7**].
- **PH** – left-click to turn on/off phase reverse.
- **ADJ** – left-click to turn on/off the automatic level adjust function, see Page 136.

Note

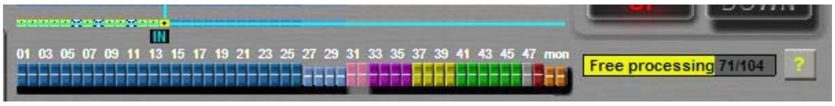
Note that you can only adjust parameters which are relevant to the selected source.

Removing an Input DSP Resource

When you remove an input patch, the input DSP resource is *not* removed from the fader. This is because the fader may be patched in another Page, and so removing the DSP resource would be unwanted.

To force the system to remove the input DSP resource:

1. Position the cursor over the yellow DSP assignment box above the fader – e.g. Fader 14:


IN
01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 mon
?

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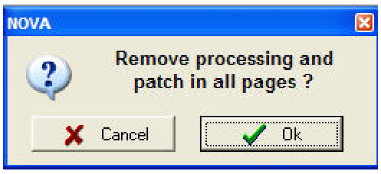
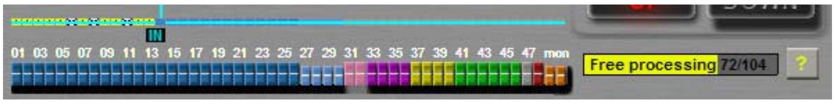
2. Press the [**SPACE bar**] or right-click.
3. You will be asked to confirm so press **OK**.



Remove processing and patch in all pages ?

The DSP resource is removed and the Free processing counter increases by one (or two if a stereo channel):


IN
01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 mon
?

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Patching Sources to Smart Faders

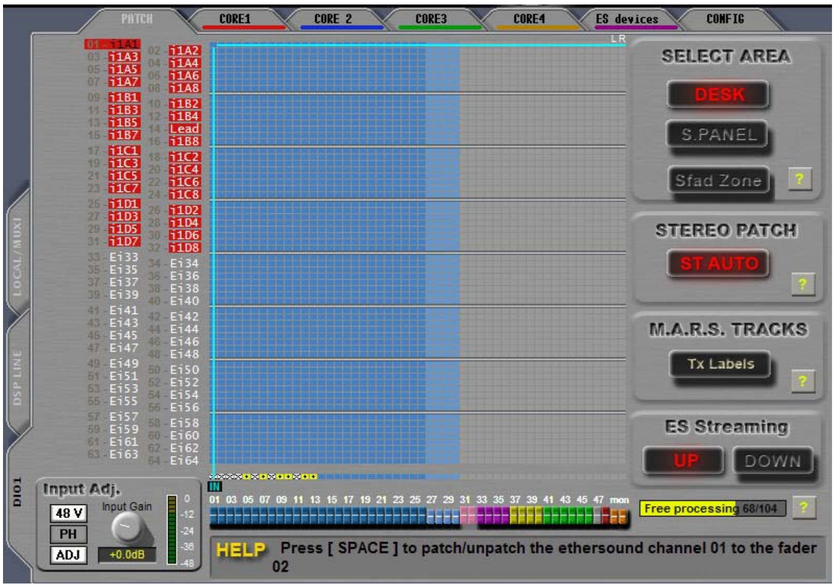
So far we have patched sources directly to mono or stereo input faders. However, to create layered control of multiple sources, we can use the **PATCH INPUT** display to patch Smart Faders.

Note

Note that you can only use this method of patching if you have configured Smart Fader slaves (SFADs) on your console. See Page 223 for details on configuration, and Page 149 for details on Smart Fader operation.

Let's take an example where we wish to control the first four DIO inputs from a single fader (Fader 01):

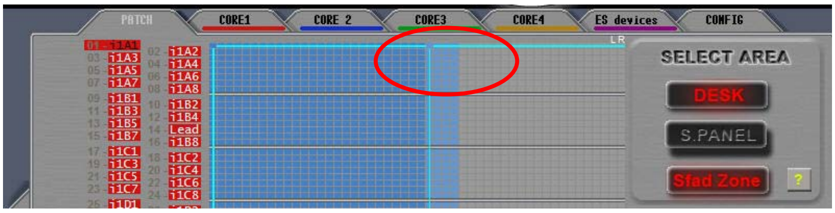
1. Select the input fader which will become the Smart Fader VCA – e.g. press **SEL** on Fader 01:



HELP Press [SPACE] to patch/unpatch the ethersound channel 01 to the fader 02

2. Either touch the **Sfad Zone** button, or press [**s**] on the keyboard:

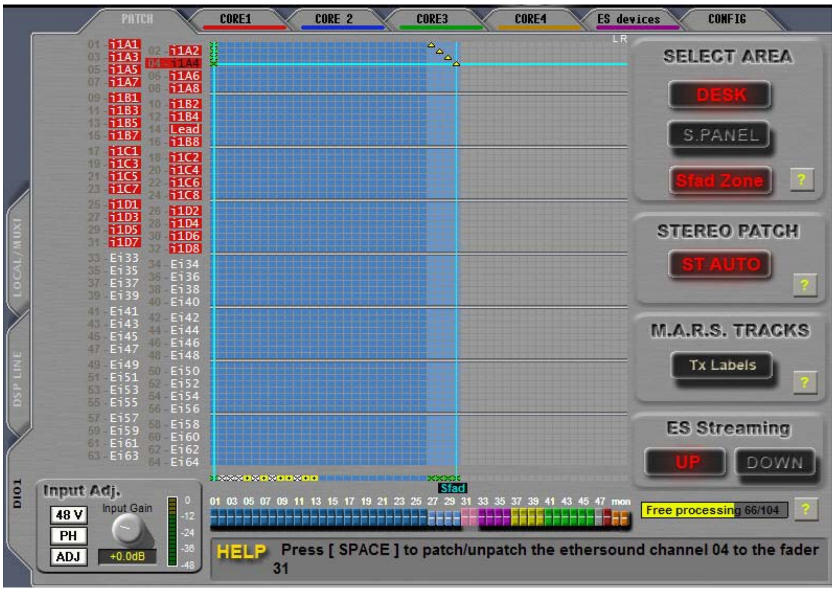
The light blue area of the patch grid moves across to your Smart Fader slaves (Sfads):



3. Now position the cursor over the first crosspoint you wish to configure – for example, Ethersound channel 1 to the first Sfad.
4. Press the [**SPACE bar**] or right-click to patch the input.

A yellow triangle indicates that the patch is made.

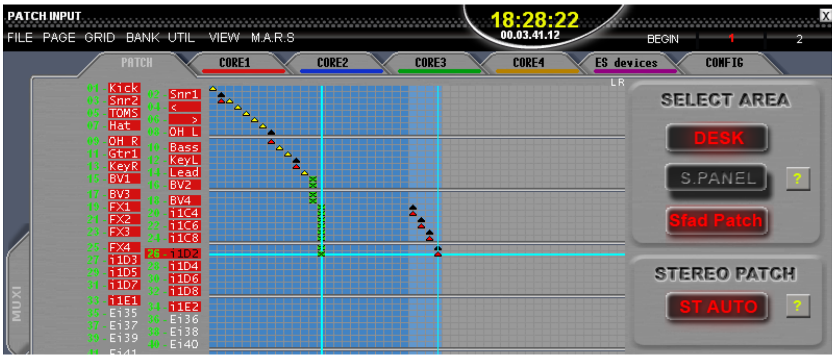
5. Repeat steps 3 and 4 to patch the other sources – in our example, inputs 1 to 4 to Smart Fader slaves 27 to 30*:*



Press [SPACE] to patch/unpatch the ethersound channel 04 to the fader 31

Tip

You can create stereo channels within the Sfad Zone by enabling the **ST AUTO** STEREO PATCH option, and patching a second source to the same fader:



6. Press **CANCEL** or [**ESC**] to exit the **PATCH INPUT** display and look across the console.

When you select your Smart Fader VCA (SVCA, **SEL** flashing), the slave channels are deployed to the Smart Fader zone (faders 27 to 30).

Smart Fader Patching Tips

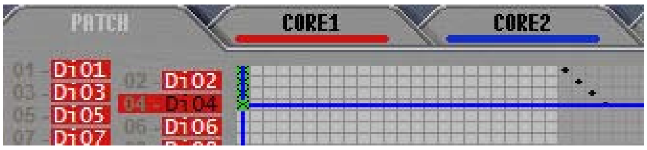
Return to the **PATCH INPUT** grid and notice that:

1. Pressing [**s**], or touching **Sfad Zone** switches between the normal patching area and the Smart Fader zone.

This allows you to configure as many SVCAs and direct input channels as you wish.

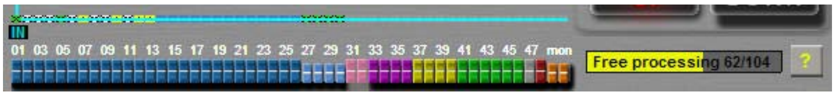
2. Crosspoints made to a SVCA are indicated with green boxes ☒.

This shows that the patch is a multiple patch, and not a direct one-to-one assignment:



3. Each time you patch a source to a Smart Fader, an input DSP resource is used.

This is indicated by ☒ boxes within the DSP resource row:


IN
01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 mon
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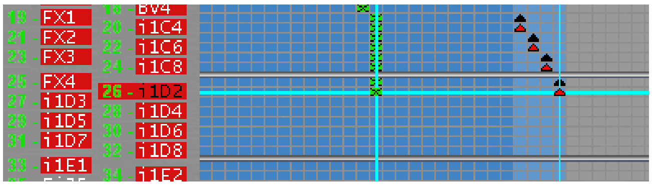
?

4. Smart Fader slaves are assigned to the control surface in the order that you patch them.

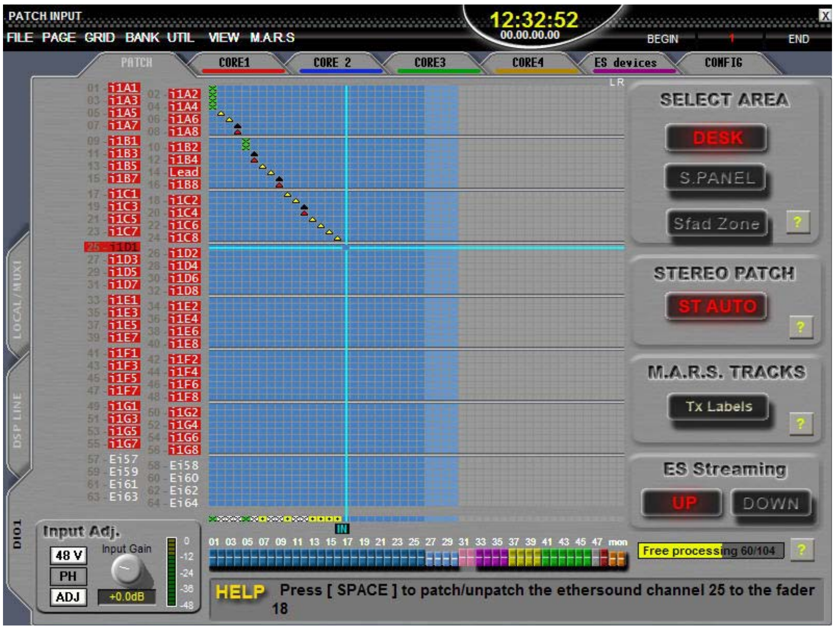
For example, if you only have two sources, you can assign them to any two faders within the Sfad zone.

5. Smart Fader slaves can be either mono or stereo.

Create stereo Smart Fader slaves by patching two inputs to the same Smart Fader – in our example, we have configured a single SVCA master controlling four stereo slaves:



The example below shows a typical **PATCH INPUT** grid for a console using Smart Faders:



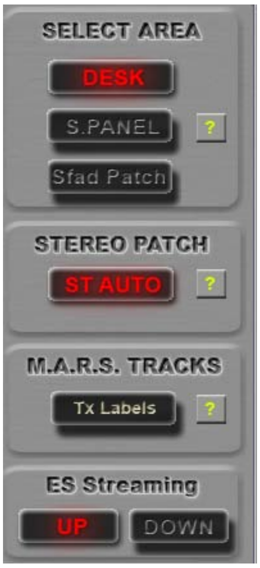
Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

Some input faders are patched directly from a source (mono ▲ or left ◣ and right ◢) while others are Smart Fader VCAs controlling multiple channels ☒.

Switch to the **Sfad Zone** and the display updates. You can now see the individual source patching for each source controlled by the selected SVCA.

On-screen Button Summary

On the right of the **PATCH INPUT** display are a number of on-screen buttons. These perform the following functions:



SELECT AREA

Selects the area of the console to patch:

- **DESK** = Faders 1 to 48.
- **S. PANEL** = Smart Panel controllers 1 to 48.
- **Sfad Zone** = Smart Fader slaves (if configured)

STEREO PATCH

Defines whether automatic stereo channel patching is enabled:

- **ST AUTO** = Stereo channels are created when you patch a second source to the same Fader or Smart Panel controller.
- **MONO** = Mono channels only. Making a second patch to the same fader replaces the existing patch rather than creating stereo channels.

M.A.R.S. TRACKS

If you have labelled the DioCore mic inputs, then you can transfer these Labels to M.A.R.S. before you record. The advantage is that each audio clip will be labelled according to its source – e.g. kick, snare, HiHat, etc.

You can perform this operation from the **PATCH INPUT** or **PATCH OUTPUT** grid, depending on whether the Ethersound channel you are recording is upstream or downstream. See Page 475 for details.

E.S. Streaming

This option is available when the **DIO1** tab is selected, and it defines the Ethersound streaming direction which will be applied when you make a patch:

- **UP** = upstream
- **DOWN** = downstream

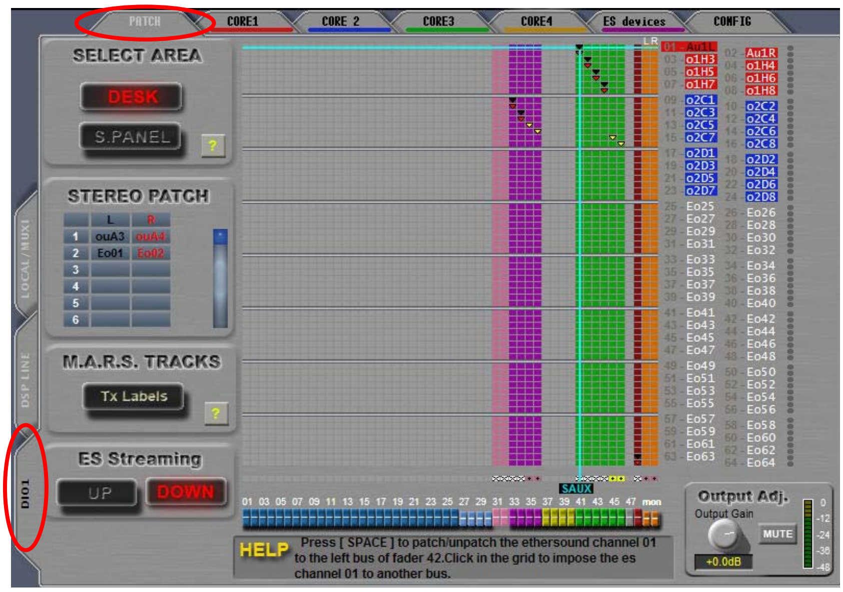
Note

Note that the direction you choose depends on the configuration of your Ethersound network. See Page 263 for more details.

The Patch Output Display

1. Select the **PATCH OUTPUT** display by pressing the **PATCH OUT** button on the UTILITIES panel.
2. And select the **PATCH** and **LOCAL / MUXI** tabs:

	Patch OUT (UTILITIES)
	"GRID -> Patch Output"
	[F12]



Press [SPACE] to patch/unpatch the ethersound channel 01 to the left bus of fader 42.Click in the grid to impose the es channel 01 to another bus.

This grid operates in a very similar way to the **PATCH INPUT** display. But this time you are patching output faders (at the bottom) to Ethersound channels (on the right).

The Ethersound channels are colour coded to indicate their final destination: red for DioCore 1, blue for DioCore 2, etc. The faders are colour coded as Auxes (green), Masters (red), Groups (pink), etc. The row of boxes above faders 01 to 48 indicates whether an output is mono ⊞ or stereo (white with a black cross).

The **PATCH OUTPUT** grid is *only* used to patch output channels (Aux, Group, Matrix or Master) to destinations. Therefore you cannot select an input or VCA fader.

Mono connections are indicated by a yellow triangle ▲ within the grid. Stereo connections are indicated by black and red triangles for left and right. If a stereo fader is selected, then the individual left, right and centre destinations are shown in the STEREO PATCH area on the left of the display.

A column of LEDs on the right shows if an output is muted (red).

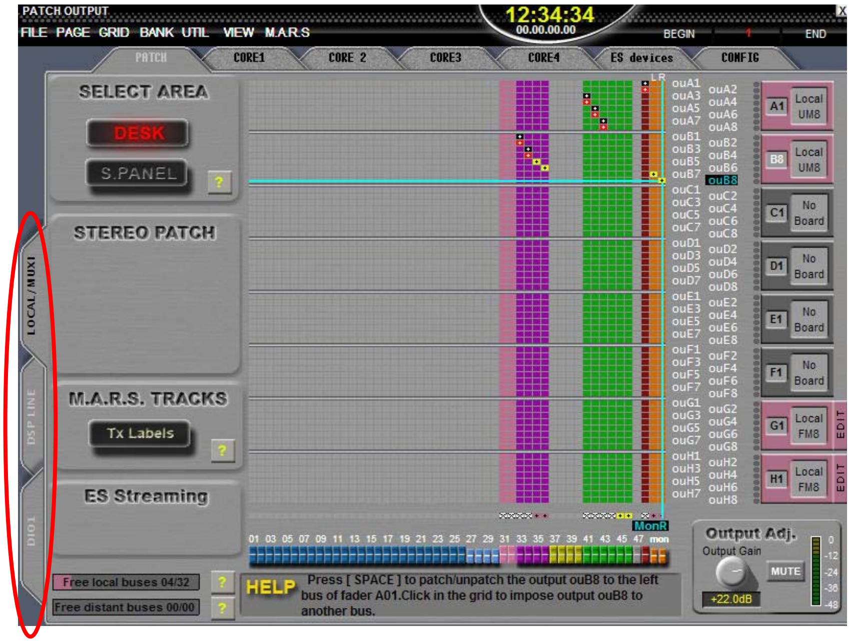
The **HELP** area at the bottom of the display provides useful help text on how to perform the next operation. Or you can interrogate an on-screen function by clicking on its yellow question mark.

At the bottom right of the display, the **Output Adj** screen controls adjust and meter the selected destination.

PATCH Tabs

Side Tabs

The three tabs on the left of the display allow you to choose different categories of system output:

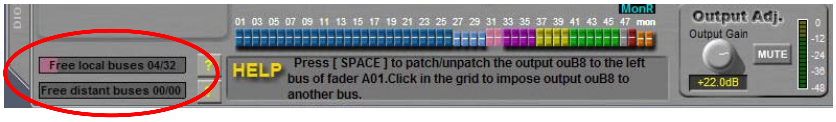


Press [SPACE] to patch/unpatch the output ouB8 to the left bus of fader A01.Click in the grid to impose output ouB8 to another bus.

- **LOCAL / MUXI** – the Muxipaire outputs (I/O cards fitted at the rear of the console or in a remote Stagebox).
- **DSP LINE** – the 16 Line Level outputs on the DSP card at the rear of the console.
- **DIO1** – the 64 channels feeding the Ethersound network. See Page 263.

Note

Note that if you select either the **DSP LINE** or **LOCAL / MUXI** tabs, then the following information appears at the bottom left of the display:



Press [SPACE] to patch/unpatch the output ouB8 to the left bus of fader A01.Click in the grid to impose output ouB8 to another bus.

For technical reasons, you may only patch up to 32 mix busses to Muxipaire interfaces. These are the I/O cards at the rear of the console (Local) or in a Muxipaire Stagebox (Distant). The display counter shows the number of local and distant busses which have been patched. There is no limit on mix bus patching within the **DIO1** grid (Ethersound network).

Top Tabs

The top tabs access additional grids for patching and configuring the Ethersound network or Muxipaire interface (see Pages 263 and 285.

Output Patching

To patch a mix bus (e.g. an Aux channel) to a physical output:

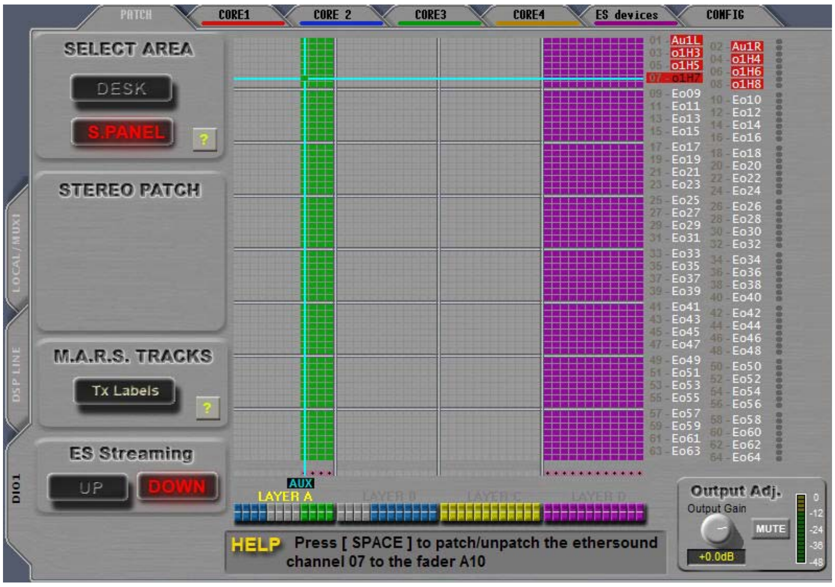
1. Select the **PATCH** tab at the top of the **PATCH OUTPUT** display.
2. And select a destination category from the left of the display:

- **LOCAL / MUXI** = the Muxipaire outputs.
- **DSP LINE** = 16 line level outputs (rear of console).
- **DIO1** = the 64 Ethersound channels.

Note

Note that if you select **DIO1**, you will need to assign which DioCore outputs, or other Ethersound devices, are fed from the 64 channels of the Ethersound network. See Page 263.

*In our example we have selected **DIO1** to patch mix busses to Ethersound channels 1 to 64:*



Press [SPACE] to patch/unpatch the ethersound channel 07 to the fader A10

3. Select an area of the console from the SELECT AREA buttons on the left of the display:

- **DESK** = Faders 1 to 48.
- **S. PANEL** = Smart Panel controllers 1 to 48.

4. If you have selected the **DIO1** tab, then select the Ethersound streaming direction from the E.S. Streaming buttons:

- **UP** = upstream
- **DOWN** = downstream

Note

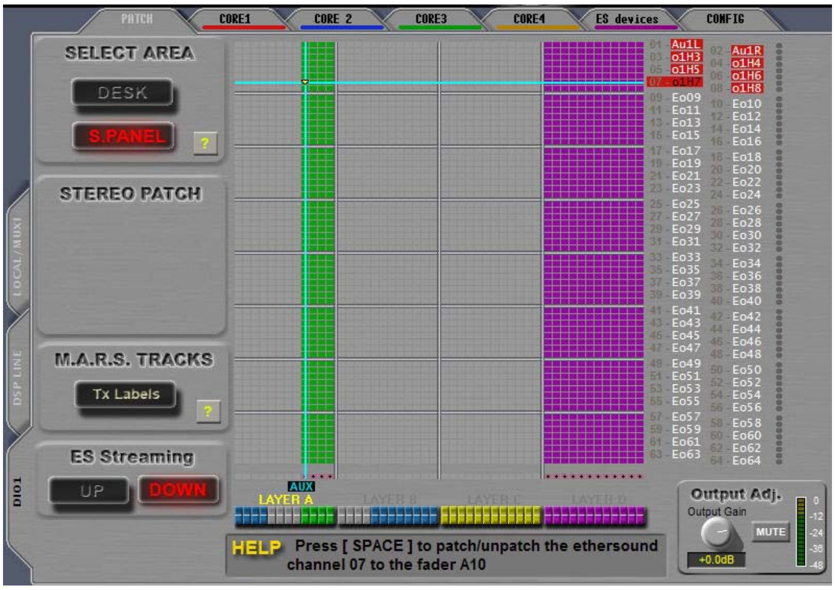
Note that the direction you choose depends on the configuration of your Ethersound network. With a standard Eclipse network, you should choose **DOWN** within this grid.

5. Now position the cursor over the desired crosspoint:

- You can select the output channel by pressing its **SEL** button.
- Then use the up and down arrows on the console keyboard to select the source.

6. And press the [**SPACE bar**] on the console keyboard, or right-click, to make the patch.

A yellow triangle confirms that the patch is made and shows the Ethersound streaming direction (up or down):



Press [SPACE] to patch/unpatch the ethersound channel 07 to the fader A10

7. Repeat these steps to patch more mono faders to their destinations.

Remember that you can patch a fader to multiple destinations if you wish.

Within the **DIO1** grid, the triangles ▲ indicate the Ethersound streaming direction. However, if you make a patch within the **DSP LINE** or **LOCAL / MUXI** grids, then a box ⊡ indicates the patch point. You can find more details on Ethersound networks on Page 263.

Stereo Output Patching

If the output channel (mix bus) is stereo, then you will need to patch the individual components (left, right and centre).

Note that you can only patch the centre channel if the bus is configured for LRC (see Page 225).

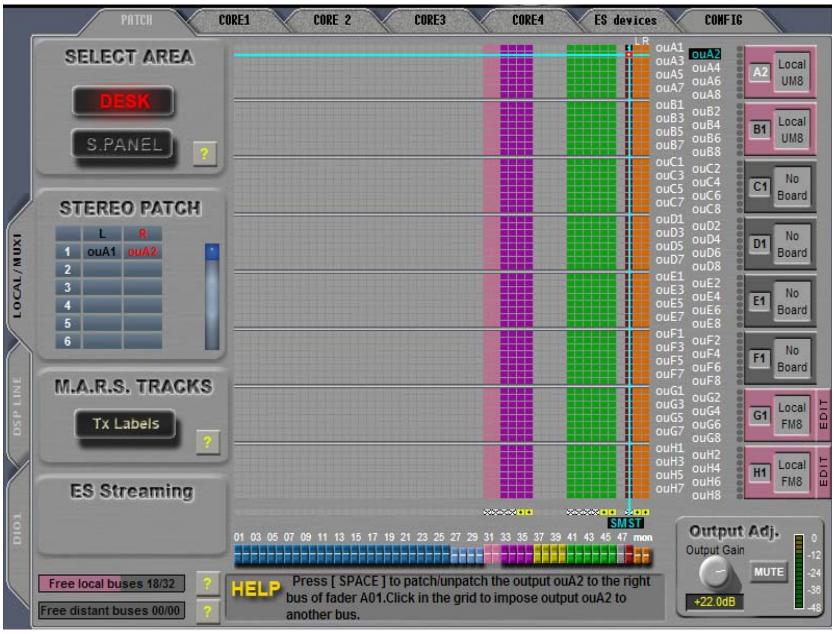
Note

1. Repeat steps 1 to 6 from the previous section to patch the left output.

A black triangle indicates that this is a left patch point.

2. With the same fader selected, position the cursor to select the destination for the right output.
3. Press the [**SPACE bar**] on the console keyboard, or right-click, to make the patch.

A red triangle indicates the right patch point:



Press [SPACE] to patch/unpatch the output ouA2 to the right bus of fader A01.Click in the grid to impose output ouA2 to another bus.

4. If the output channel (mix bus) is LRC, then repeat the process to patch the centre channel.

A green triangle indicates the centre patch point.

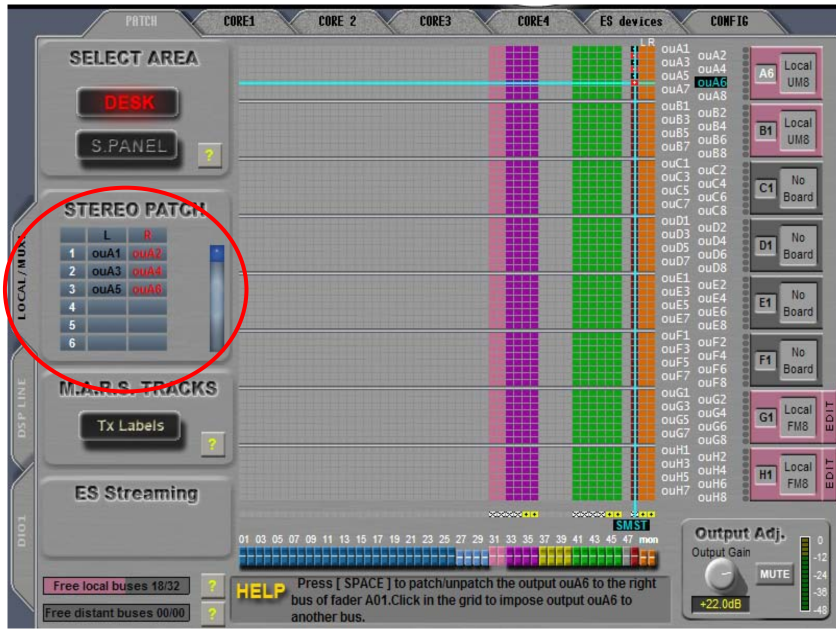
5. To remove an existing patch, select the crosspoint and press the [**SPACE bar**] or right-click again.

The patch is removed; the triangle disappears.

6. To patch a stereo bus to multiple destinations, keep the same fader selected and repeat steps 2 and 3.

Each time you make a patch, you assign the next component channel: left, right (and centre if the bus is LRC).

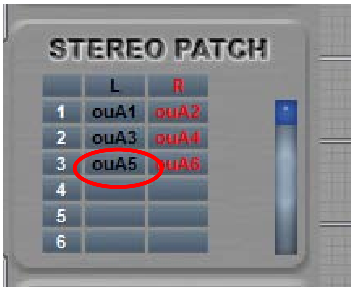
As you patch, notice that the STEREO PATCH area on the left of the display updates:



Press [SPACE] to patch/unpatch the output ouA6 to the right bus of fader A01.Click in the grid to impose output ouA6 to another bus.

This list shows the output Label for each left, right (and centre) assignment. In our example, we have patched the selected fader 3 times.

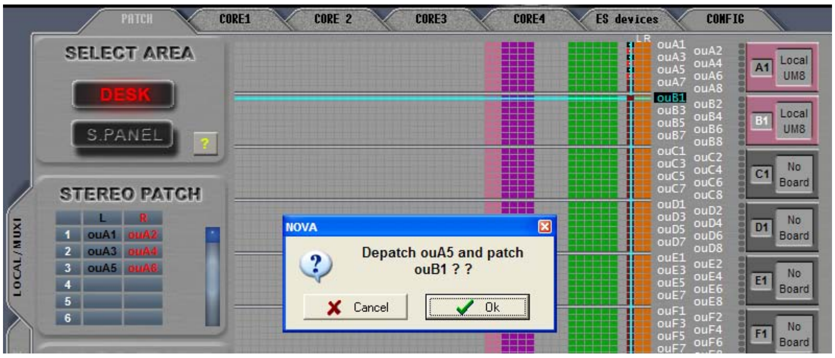
You can use this list to make patches or edit existing ones. This is particularly useful if you are patching stereo busses to non-consecutive outputs. For example:



	L	R
1	ouA1	ouA2
2	ouA3	ouA4
3	ouA5	ouA6
4		
5		
6		

7. Position the cursor over the new destination (e.g. **ouB1**) and then click on the STEREO PATCH Label you wish to update – in our example, click on **ouA5** to update the left side of output pair 3:

A pop-up appears asking you to confirm the operation:



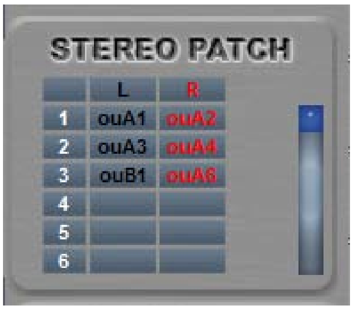
Depatch ouA5 and patch ouB1 ? ?

8. Press **OK** to confirm.

The output patch is updated.

Note

Note that the only indication that the stereo pair is non-consecutive comes from the STEREO PATCH list:



STEREO PATCH

	L	R
1	ouA1	ouA2
2	ouA3	ouA4
3	ouB1	ouA6
4		
5		
6		

You can also use the STEREO PATCH area to remove existing patch points.

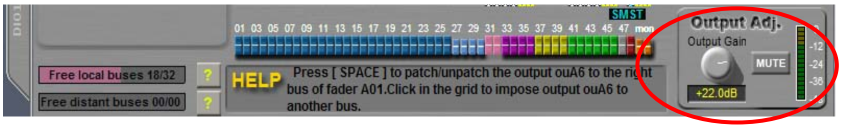
Patching Tips

The following tips make patching on Eclipse quick and easy:

- To make consecutive mono patch points, press [**SHIFT**] on the console keyboard and click and drag diagonally across the grid.
- You can assign rotary controls on the User Defined panel to select the x-axis and y-axis within the patch grid. Switches may be assigned to action crosspoints or edit labels. See Page 322 for details.
- You can patch an output channel to multiple destinations. Therefore, it can often be useful to check your patching by returning to the Main Mix display. See Page 200.

Controlling Output Parameters

At the bottom of the display, the **Output Adj** controls adjust and meter the selected destination:



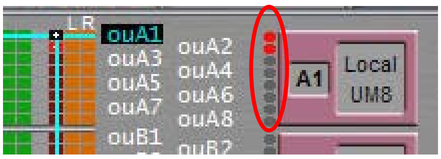
Press [SPACE] to patch/unpatch the output ouA6 to the right bus of fader A01.Click in the grid to impose output ouA6 to another bus.

- **Output Gain** – left-click to increase or right-click to decrease the gain. Or press [**F5**] or [**F6**].

This adjusts the output level on the card 0.5dB steps. It corresponds to the output level, in dBu, received when a signal at 0dBFS, measured on the vu meter of the desk, is routed to the output.

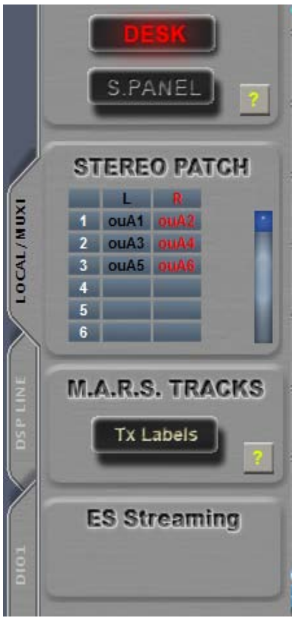
- **MUTE** – left-click to mute or unmute the output. Or press [**F8**].

When muted, a red LED appears beside the output Label:



On-screen Button Summary

On the left of the **PATCH OUTPUT** display are a number of on-screen buttons. These perform the following functions:



	L	R
1	ouA1	ouA2
2	ouA3	ouA4
3	ouA5	ouA6
4		
5		
6		

SELECT AREA

Selects the area of the console to patch:

- **DESK** = Faders 1 to 48.
- **S. PANEL** = Smart Panel controllers 1 to 48.

STEREO PATCH

Lists individual patch points for stereo outputs (LR and LRC).

Click to make, remove or edit an existing patch.

M.A.R.S. TRACKS

If you have labelled the DioCore mic inputs, then you can transfer these Labels to M.A.R.S. before you record. The advantage is that each audio clip will be labelled according to its source – e.g. kick, snare, HiHat, etc.

You can perform this operation from the **PATCH INPUT** or **PATCH OUTPUT** grid, depending on whether the Ethersound channel you are recording is upstream or downstream. See Page 475 for details.

E.S. Streaming

This option is only available when the **DIO1** tab is selected, and it defines the Ethersound streaming direction which will be applied when you make a patch:

- **UP** = upstream
- **DOWN** = downstream

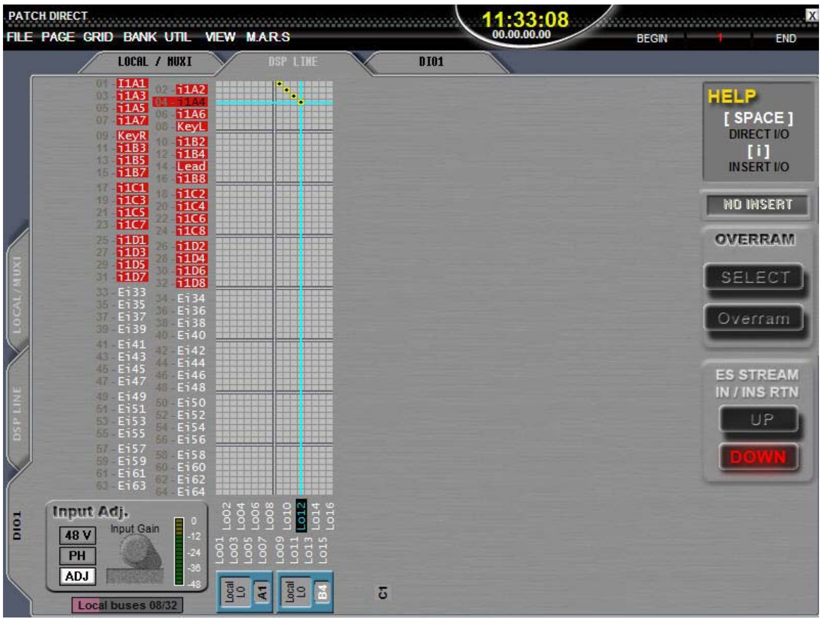
Note

Note that the direction you choose depends on the configuration of your Ethersound network. See Page 263 for more details.

The Patch Direct Display

ECLIPSE	**D I/O** **(UTILITIES)**
	“GRID -> Patch Direct I/O”
	[F10]

1. Select the **PATCH DIRECT** display by pressing the **D I/O** button on the UTILITIES panel.



This grid is used to patch a source (on the left) to a destination (on the bottom).

2. Use the **DIO1**, **DSP LINE** and **LOCAL / MUXI** tabs on the left to select a source category.

If you select **DIO1**, then you will need to select the Ethersound streaming direction for the source (ES STREAM IN):

- **UP** = upstream
- **DOWN** = downstream

Note

Note that the direction you choose depends on the configuration of your Ethersound network, see Page 263.

3. And the **DIO1**, **DSP LINE** and **LOCAL / MUXI** tabs at the top to select a destination category.

If you select **DIO1**, then you will need to select the Ethersound streaming direction for the destination (ES STREAM OUT).

4. To make or remove patch points, select the crosspoint and press the [**SPACE bar**] on the console keyboard, or right-click.

Connections are indicated by a yellow box ▣ within the grid.

The **HELP** area provides useful help text on how to perform the next operation. Or you can interrogate an on-screen function by clicking on its yellow question mark.

Controlling Input Parameters

The **Input Adj** area can be used to adjust settings for the selected source. This is particularly useful for sources which are not assigned to a fader (e.g. a Talkback mic).

The parameters vary depending on where the source is connected (e.g. you will only get full analogue input control on SI-8D3 inputs).

The controls work in the same way as on the **PATCH INPUT** display, see Page 239.

Over Ram for Direct I/O

The OVERRAM buttons on the right of the display allow you to select a single crosspoint, or an area of crosspoints, so that patching and IO parameters can be written into other Pages in RAM. This allows you to modify settings for the Pages which will play out during a show.

For example, if you have a talkback mic which is routed directly to a DioCore output (for talkback to the monitor mixer), and you adjust its patching or IO settings, then you can use the OVERRAM function to write these changes into the other Pages of the show.

Note

Note that the principles of operation are identical to those of the main **Over Ram** display, see Page 399. However, the **Over Ram** display acts only on the selected channel(s). OVERRAM from the **PATCH DIRECT** grid acts on the selected source and destination, enabling you to Over Ram signals which are not connected to a Fader strip or Smart Panel controller.

Note that parameters are updated according to their absolute values; you cannot trim an existing value.

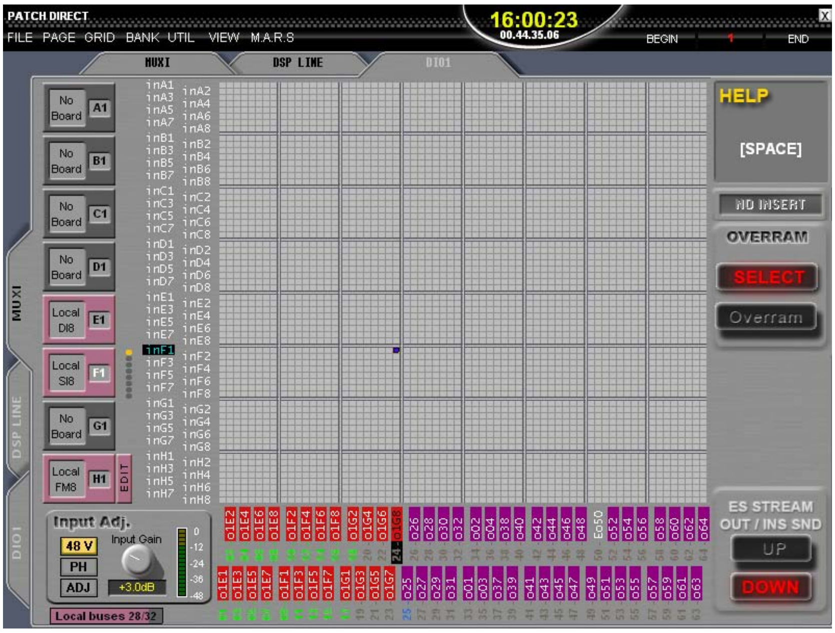
To Over Ram a patch point or its IO settings:

1. Make your patch and adjust any input or output settings – for example, set the mic gain, 48V and phase reverse using the **Input Adjust** controls.
2. Click on the OVERRAM **SELECT** button.

The button turns red when active.

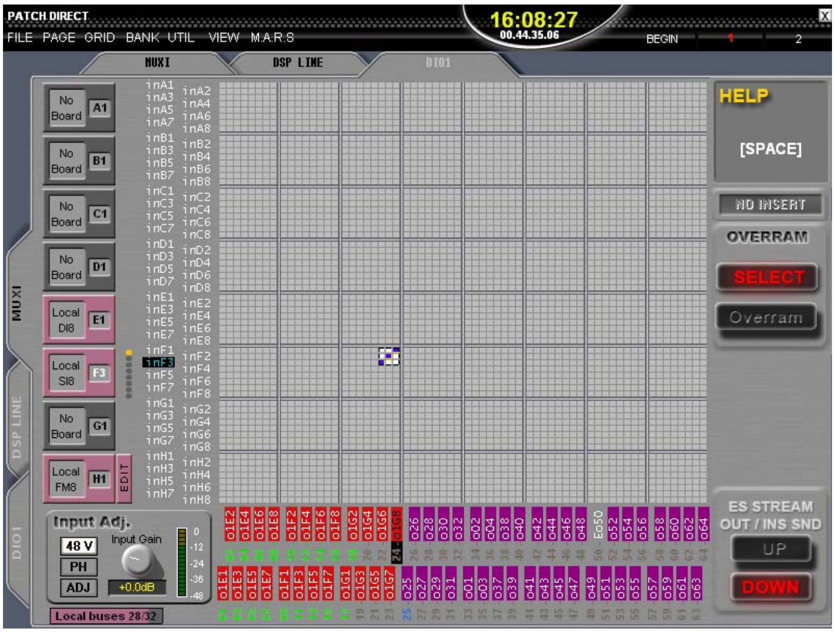
3. Then click on the crosspoint you wish to Over Ram.

A white box shows your selection:



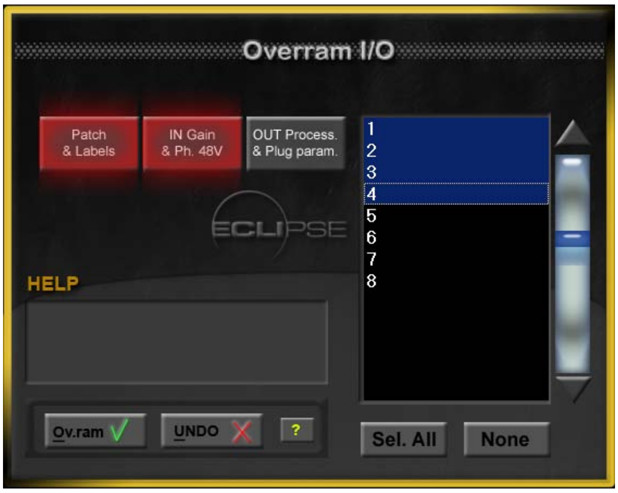
Tip

You can select an area of crosspoints, by clicking and dragging across an area of the patch grid:



4. When you have made your selection, click on the **Over Ram** button.

*The **Over Ram I/O** pop-up window appears:*



5. Use the three large buttons to select what you want to Over Ram:

- **Patch & Labels** – the patch points and Labels
- **IN Gain & Ph. 48V** – input parameters for the selected source.
- **OUT Processing & Plug param.** – output parameters for the selected destination.

The buttons turn red when selected.

6. Now select the Pages you wish to copy to on the right of the display.

Pages are highlighted in blue when selected.

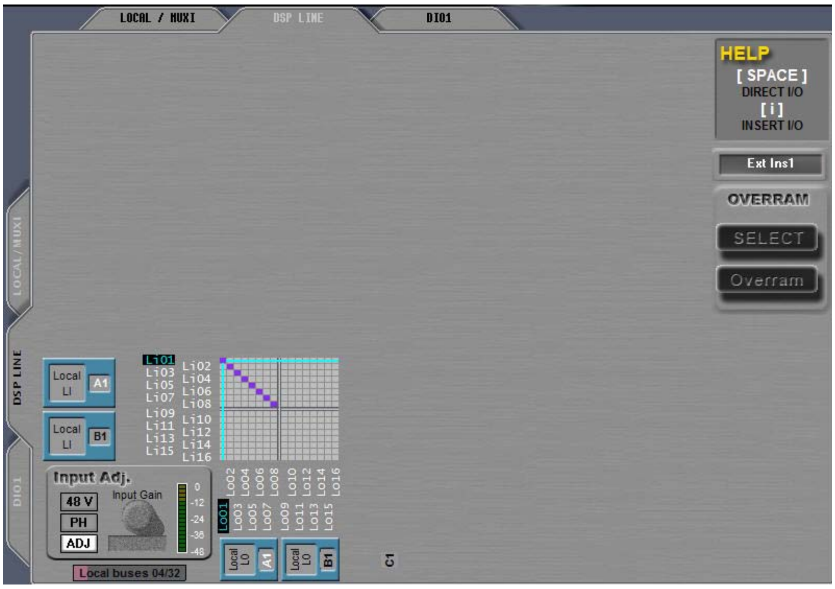
7. When you are ready, press **OK** or click on **Ov.ram** to perform the operation.

The chosen parameters for the selected crosspoints are written into the selected Pages in RAM.

Parameters are only written to Pages in RAM, and will not affect Pages saved to a File on hard disk. If you wish to keep your Over Ram changes for another day, save the File to write the RAM Pages to hard disk, see Page 347.

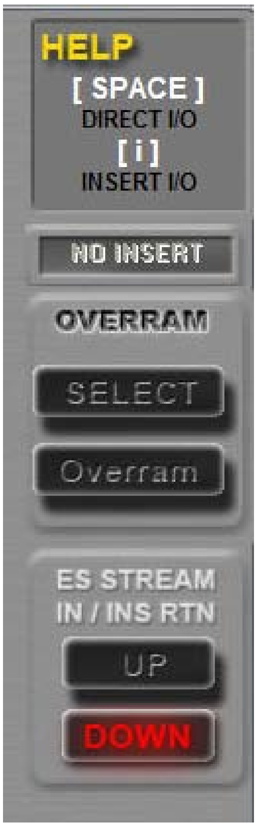
Insert Points

In addition to patching, the **PATCH DIRECT** grid is used to define insert points. Once defined they are displayed as purple boxes on the grid; the name of the selected insert is shown within the INSERT area:



See Page 309 for details on defining and naming insert points.

On-screen Button Summary



On the right of the **PATCH DIRECT** display are a number of on-screen buttons. These perform the following functions:

HELP AREA

The **HELP** area provides useful help text on how to perform the next operation. Or you can interrogate an on-screen function by clicking on its yellow question mark.

INSERT

If the selected crosspoint is an insert, then its name is shown here.

OVERRAM

Use the **SELECT** and **Over Ram** buttons to Over Ram patching and IO settings into other Pages in RAM.

E.S. STREAM IN

This option is only available when the left **DIO1** tab is selected, and it defines the Ethersound streaming direction for the selected source:

- **UP** = upstream
- **DOWN** = downstream

E.S. STREAM OUT

This option is only available when the top **DIO1** tab is selected, and it defines the Ethersound streaming direction for the selected destination:

- **UP** = upstream
- **DOWN** = downstream

Note

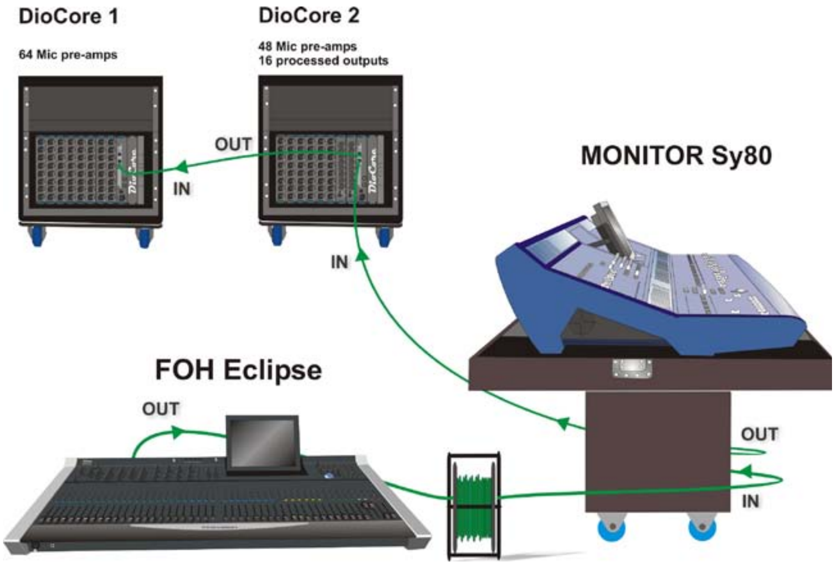
Note that the direction you choose depends on the configuration of your Ethersound network. See Page 263 for more details.

Ethersound Networks

Ethersound is an open protocol offering 64 channels of bidirectional audio via a CAT5 network cable (up to 100m).

The standard Eclipse package includes one DioCore and M.A.R.S. which connect to the console via Ethersound.

Multiple DioCores and other Ethersound devices may be added in order to distribute I/O or link I/O between Innovason consoles:



Up to 4 DioCores may be active on each console at any one time, plus an unlimited number of other Ethersound devices. The console operator may then select which 64 inputs and 64 outputs they wish to use by patching upstream or downstream onto the Ethersound network.

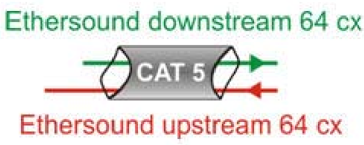
The Primary Master

The order of **IN** and **OUT** connections determine which device is the Ethersound Primary Master. The Primary Master is the first device on the network; in other words it will be left with its Ethersound **IN** port free. In our example above, this is the FOH Eclipse.

Note

This is important as it is the Primary Master which automatically detects devices on the network, and assigns the streaming direction for the 64 Ethersound channels.

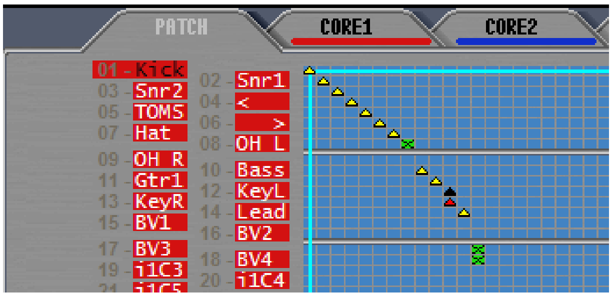
Upstream and Downstream Patching



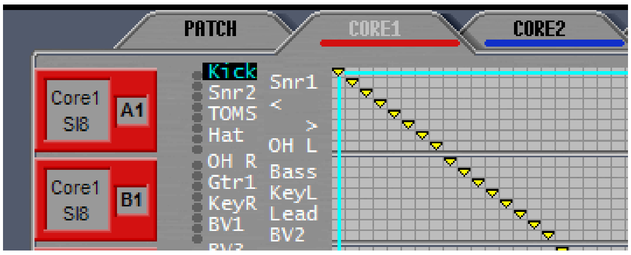
Ethersound carries 64 channels upstream plus 64 channels downstream.

It is important when you make a patch, that you select the correct streaming direction for your network configuration; the streaming direction is displayed within the **DIO1 PATCH** grids:

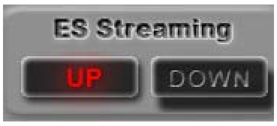
- An up triangle indicates an upstream patch:



- A down triangle indicates a downstream patch:



1. Select the streaming direction from the ES Streaming buttons:



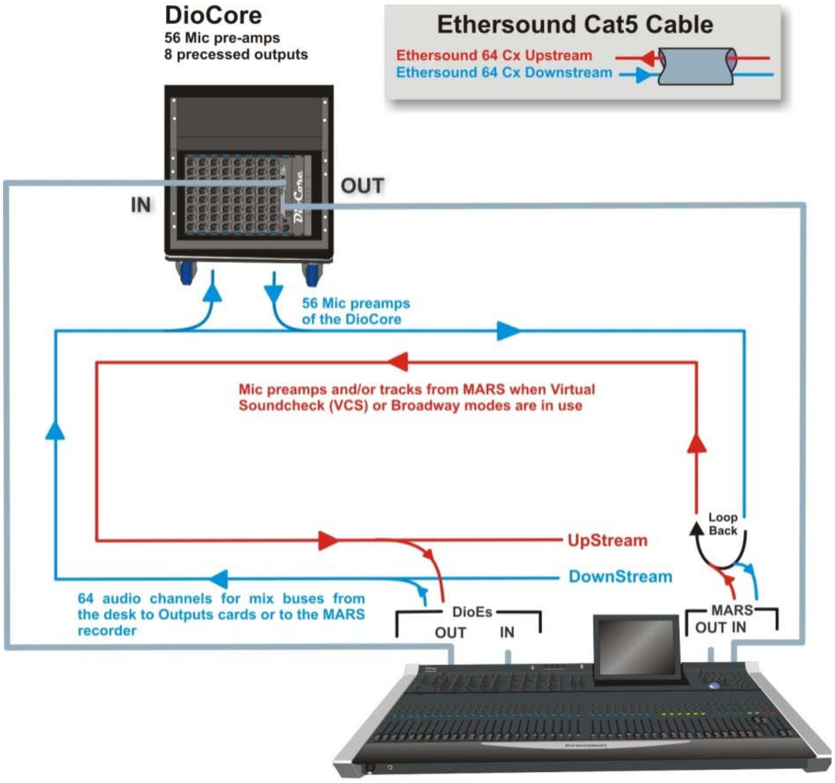
2. Press the [**SPACE bar**] on the console keyboard, or right-click, to make the patch.

Alternatively, you patch directly from the console keyboard:

- Press [**D**] to make a downstream patch.
- Press [**U**] to make an upstream patch.

The Standard Ethersound Network

The diagram below shows the Ethersound connections and audio streaming for the standard Eclipse package:


DioCore
56 Mic pre-amps
8 processed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
Loop Back
UpStream
DownStream
64 audio channels for mix buses from the desk to Outputs cards or to the MARS recorder
DioEs
OUT
IN
MARS
OUT IN

Eclipse is the Primary Master of this network; M.A.R.S. is connected at the end of the chain.

Mic preamps from the DioCore are patched *downstream* onto the Ethersound channels so that they can be recorded to M.A.R.S. (use the **PATCH INPUT** display – **DIO1** and **Core 1** tabs, see Page 268).

The Ethersound channels are automatically looped back to the console, and patched *upstream* to its Faders or Smart Panel controllers (use the **PATCH INPUT** display – **DIO1** and **PATCH** tabs, see Page 235).

Mix busses from the console are patched *downstream* so that they will reach the DioCore or M.A.R.S (use the **PATCH OUTPUT** display – **DIO1** and **PATCH** tabs, see Page 249). Note that downstream channels 1 to 56 are replaced by mic preamps from the DioCore. So, if you wish to record a mix bus on M.A.R.S., patch downstream to channels 57 to 64.

In the unlikely event of a M.A.R.S. failure, the DioCore becomes the last device in the chain, and automatically loops the downstream data back onto the upstream path without any break in audio.

Advanced Ethersound Networks

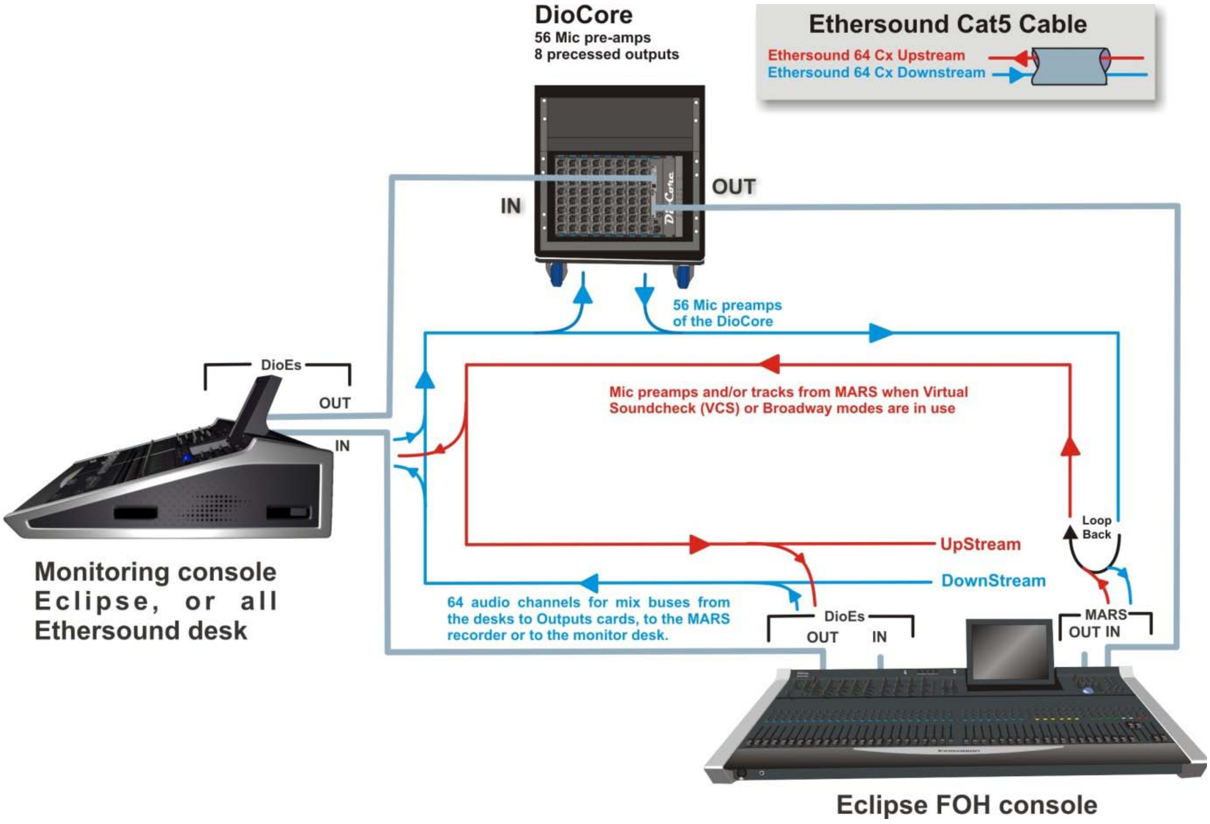
To add more DioCores or other Ethersound devices, insert each device into the middle of the chain. This keeps Eclipse as the Primary Master and M.A.R.S. as the last device in the chain.

Note

Note that if a device fails, then the previous device in the chain automatically loops the downstream data back onto the upstream path without any break in audio.

When more than one console exists, then you may wish to use either of the following configurations:

Example 1:

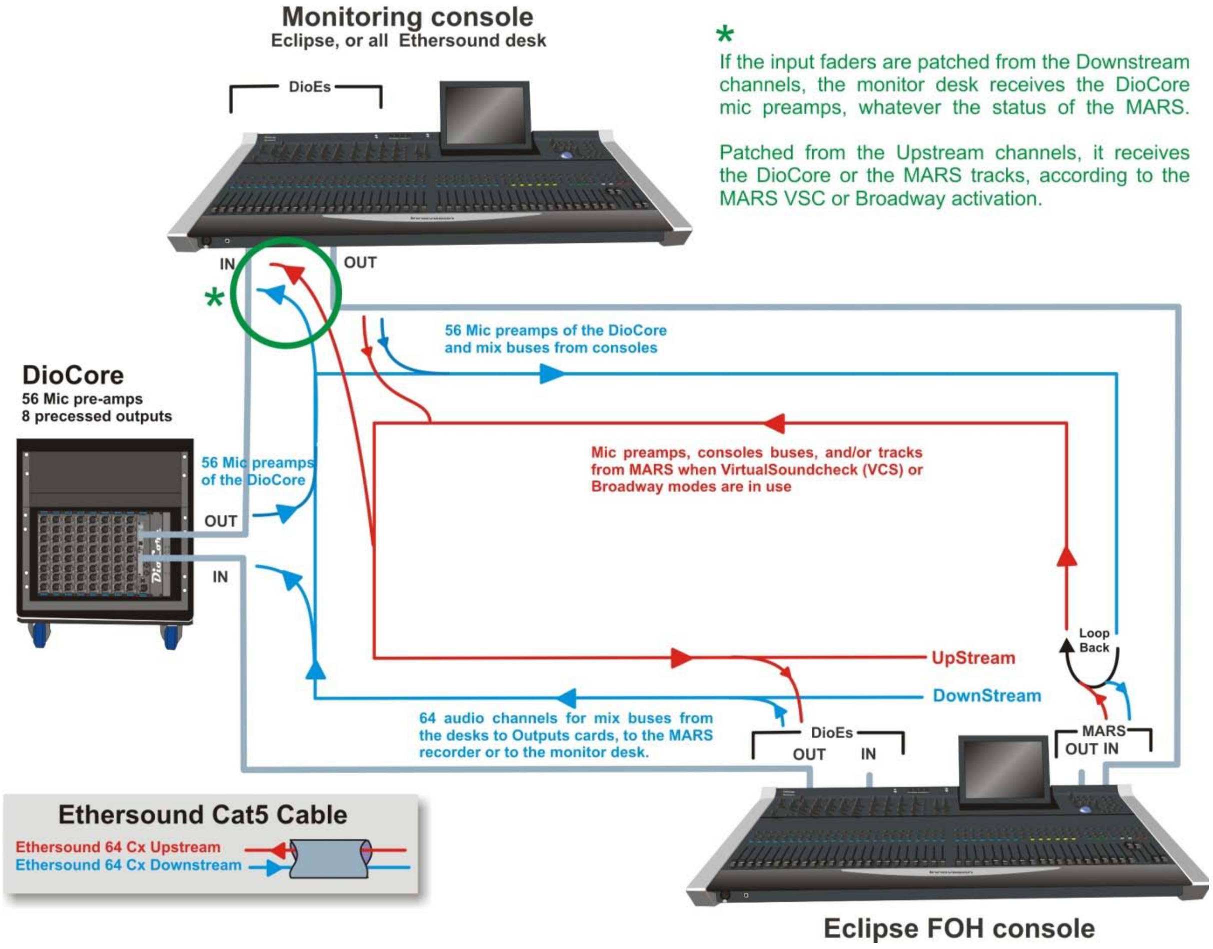

DioCore
56 Mic pre-amps
8 precessed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
DioEs
OUT
IN
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
Loop Back
UpStream
DownStream
64 audio channels for mix buses from the desks to Outputs cards, to the MARS recorder or to the monitor desk.
DioEs
OUT
IN
MARS
OUT IN
Monitoring console Eclipse, or all Ethersound desk
Eclipse FOH console

The FOH Eclipse is the Primary Master and defines the Ethersound network and streaming direction. The monitoring console cannot detect DioCores or change the data flow, but it can patch Ethersound channels to or from its faders.

In this configuration, the replay tracks from the FOH M.A.R.S. will affect feeds to both the FOH and monitoring consoles when running in **VSC** or **Broadway** mode.

Example 2:

If you do not wish the FOH M.A.R.S to affect Ethersound channels feeding the monitoring console, then configure the network as follows:


Monitoring console
Eclipse, or all Ethersound desk
DioEs
IN
OUT
*
56 Mic preamps of the DioCore
and mix buses from consoles
DioCore
56 Mic pre-amps
8 precessed outputs
56 Mic preamps
of the DioCore
OUT
IN
Mic preamps, consoles buses, and/or tracks
from MARS when VirtualSoundcheck (VCS) or
Broadway modes are in use
UpStream
DownStream
Loop
Back
64 audio channels for mix buses from
the desks to Outputs cards, to the MARS
recorder or to the monitor desk.
DioEs
OUT
IN
MARS
OUT IN
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
Eclipse FOH console

* If the input faders are patched from the Downstream channels, the monitor desk receives the DioCore mic preamps, whatever the status of the MARS.

Patched from the Upstream channels, it receives the DioCore or the MARS tracks, according to the MARS VSC or Broadway activation.

The monitoring console can decide what it receives by changing its Ethersound channel patching:

- Patching from downstream Ethersound channels (shown in blue) = always DioCore mic inputs.
- Patching from upstream Ethersound channels (shown in red) = channels will be switched between mic and replay according to the FOH Eclipse **VSC** and **Broadway** modes.

Patching the Ethersound Channels

With more than one Ethersound device on the network, you need to decide which 64 sources and 64 destinations feed the Ethersound channels.

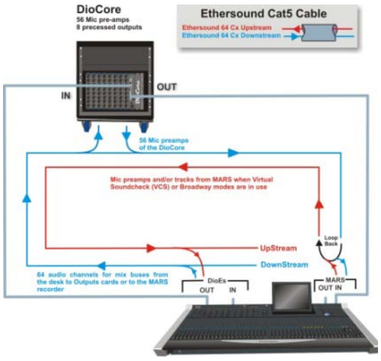
This is handled from the **Core 1**, **Core 2**, **Core 3**, **Core 4** and **ES devices** tabs on the **PATCH INPUT** and **PATCH OUTPUT** displays of the Primary Master device.

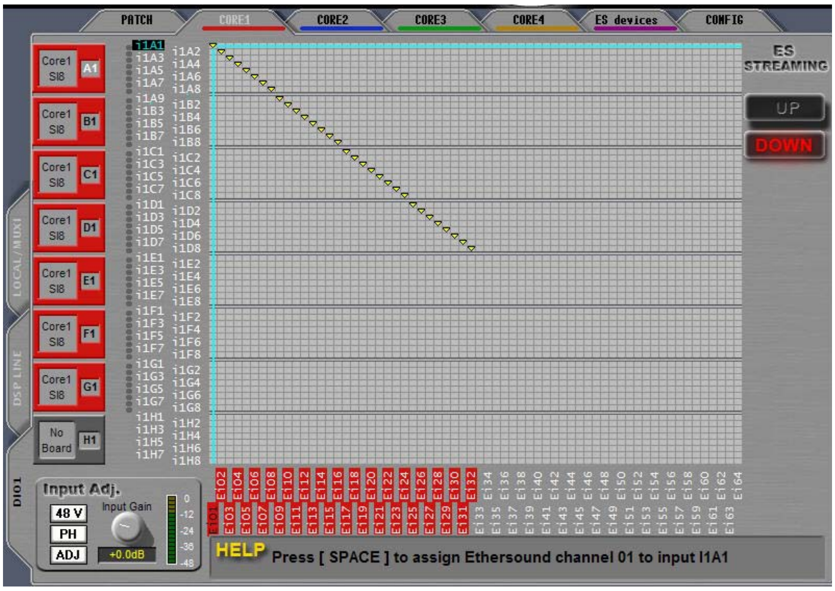
	Patch IN (UTILITIES)
	"GRID -> Patch Input"
	[F11]

To assign sources to Ethersound channels:

1. Select the **PATCH INPUT** display.
2. Select the first DioCore you wish to assign – e.g.**Core 1**.
3. Use the patch grid to patch the physical sources from the DioCore (on the left) to Ethersound channels 1 to 64 (at the bottom).

Note that the choice of ES streaming depends on your network configuration. In a standard Eclipse installation, sources are patched downstream so that they feed both M.A.R.S. and the console:


DioCore
56 Mic pre-amps
8 precessed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
UpStream
DownStream
Loop Back
64 audio channels for mix buses from the desk to Outputs cards or to the MARS recorder
DioEs
OUT IN
MARS
OUT IN



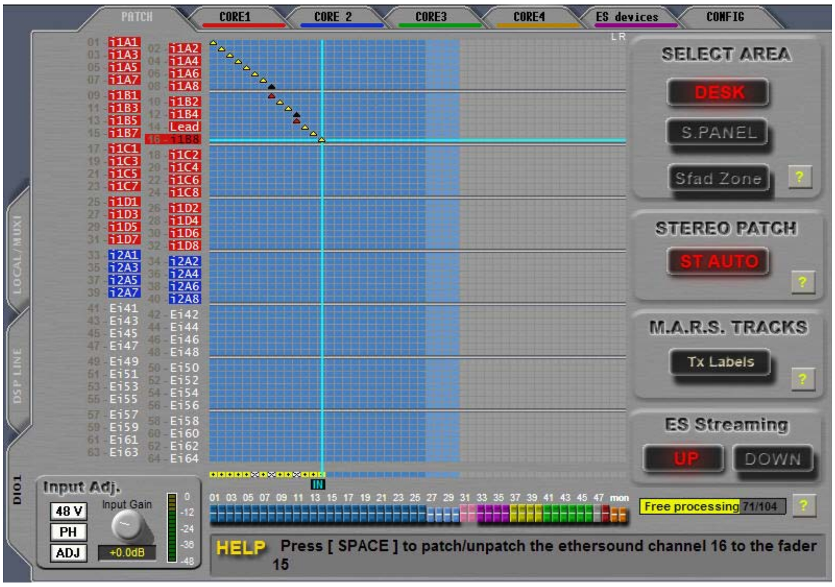
Press [SPACE] to assign Ethersound channel 01 to input I1A1

4. Repeat these steps to assign sources from Cores 2, 3 and 4, or from other ES devices.

You can select any combination of sources to feed the 64 Ethersound channels.

5. Once you have completed the DioCore assignments, click on the **PATCH** tab.

This grid can now be used to patch each Ethersound channel to an input fader as described on Page 235:



Press [SPACE] to patch/unpatch the ethersound channel 16 to the fader 15

Notice that:

- The Ethersound channels (on the left) are colour coded to show their origin:
    - Red = sources from Core 1
    - Blue = sources from Core 2
    - Green = sources from Core 3
    - Yellow = sources from Core 4
    - Purple = sources from other Ethersound devices.
    - White = not assigned to any device.
- Each Ethersound channel automatically inherits the user Label given to the DioCore source – for example, the name **i1A1** comes from Core 1, Slot A, Input 1, etc.

To decide which physical destinations are fed from the 64 Ethersound output channels, repeat the process but from the **PATCH OUT** display.

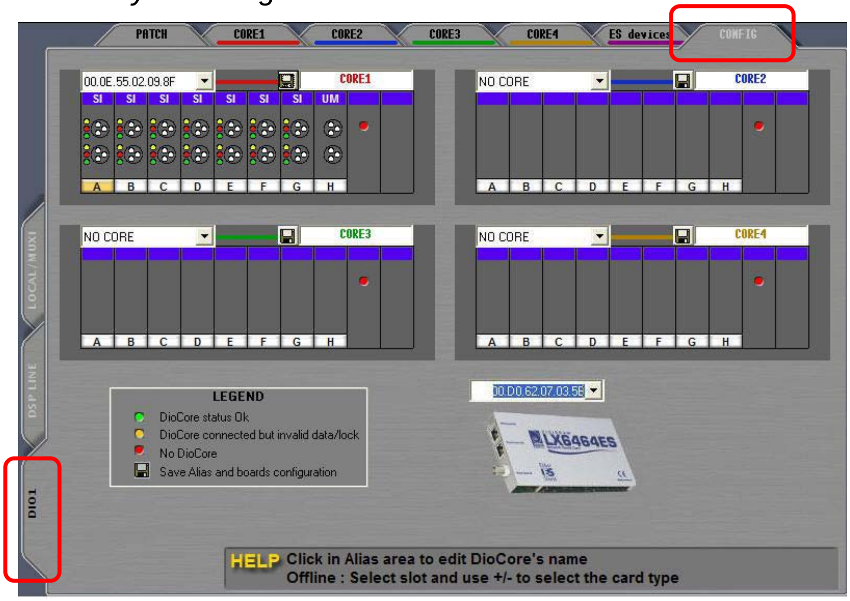
DioCore Configuration

If there are more than four DioCores connected to the network, then you need to select which units are in use. You can check the DioCore configuration from the **PATCH INPUT** display as follows:

	Patch IN (UTILITIES)
	“GRID -> Patch Input”
	[F11]

1. Select the **PATCH INPUT** display.
2. Select the **DIO1** tab on the left followed by the **CONFIG** tab at the top of the display.

The display updates to show the 4 DioCores and M.A.R.S. saved in your configuration:



LEGEND
- DioCore status Ok
- DioCore connected but invalid data/lock
- No DioCore
- Save Alias and boards configuration

HELP Click in Alias area to edit DioCore's name
Offline : Select slot and use +/- to select the card type

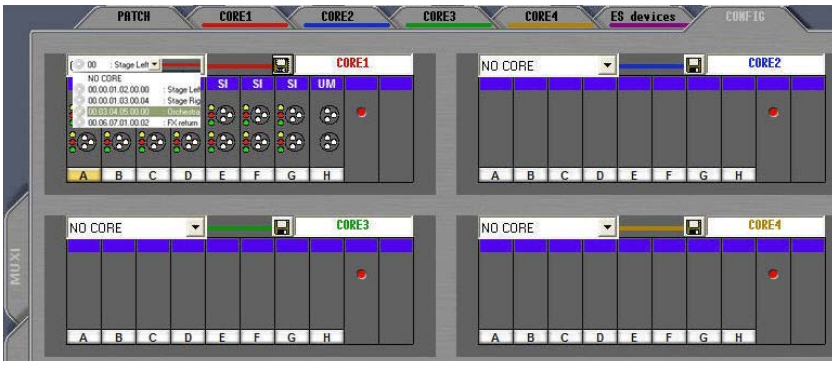
Our example shows a standard Eclipse package which includes one DioCore unit (**Core 1**). You can see the MAC address of the unit, its name (**Core 1**) and I/O card configuration (**SI** = SI-8D3 card, **UM** = UM-8PO card, etc.)

If the DioCore is powered and correctly connected to the network, then its status LED will be green. In our example, the DioCore is not connected and so its status LED is red).

Above the picture of the M.A.R.S. Ethersound card, you should see its MAC address. For more details on M.A.R.S., see Page 444.

⏩ Selecting a DioCore

1. Click on the MAC address box and select the address of the DioCore from the drop-down menu:



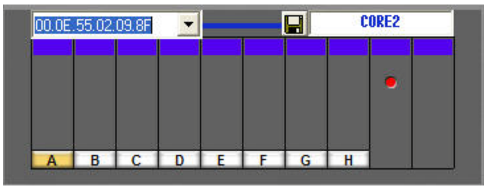
Note that all DioCores are automatically detected by the Primary Master once they are connected to the network. So, if you cannot see your device, check the network connections.

Note

⏩ Offline Configuration

If you are working offline then you will only see the MAC addresses of previously saved DioCores. If you have a new unit to configure, then you can prepare a configuration offline:

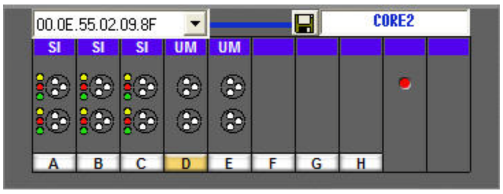
1. Type in the DioCore MAC address:



The DioCore MAC address can be found on a sticker on the ARC card’s PCB.

Tip

2. Then click on a card slot (e.g. **A**) and press the [**+**] or [**-**] buttons on the console keyboard to scroll through the available I/O card types.
3. Click the each slot and assign the I/O cards as they are fitted to the DioCore:



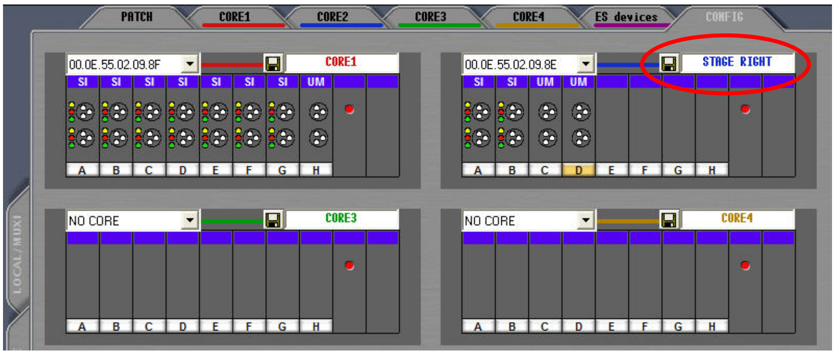
4. Once you have finished, click on the save configuration button💾, and press **OK** to confirm.

The Core configuration is saved; it can be loaded to any of the four DioCore racks from the MAC address drop-down menu.

⏩ Naming a DioCore

Whether working online or offline, you can give each DioCore an alias name:

1. Type in the name in the alias name field:



*Once renamed, the Core alias is used to reference the DioCore in all displays – for example, at the top of the **PATCH** grids.*

2. Press the save configuration button 💾, and **OK**, to save the new alias name.

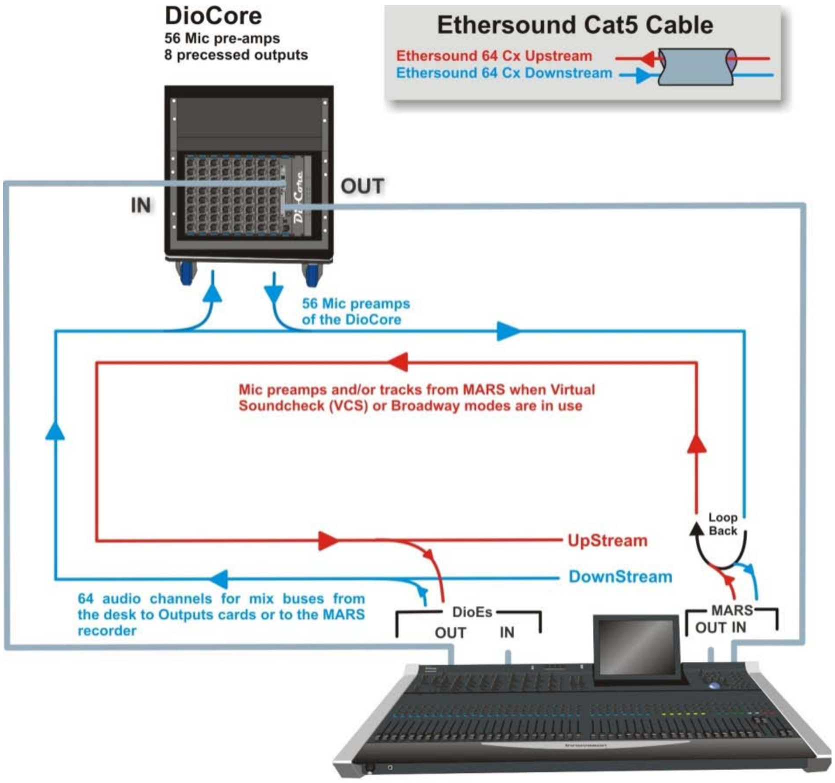
Other Ethersound Devices

In addition to DioCores, other Ethersound devices may be connected to the network. Each device is automatically detected by the Primary Master; there is no limit on the number. However, remember that the 64 Ethersound channels to and from the console must be shared between all ES devices and any DioCores.

I/O patching can be controlled for any Ethersound device on the network. In addition, the Nova software supports parameter control for specially supported Ethersound devices. These include Digigram’s Aqonda 16, Innovason’s SR-16 and Neumann’s DMI-8.

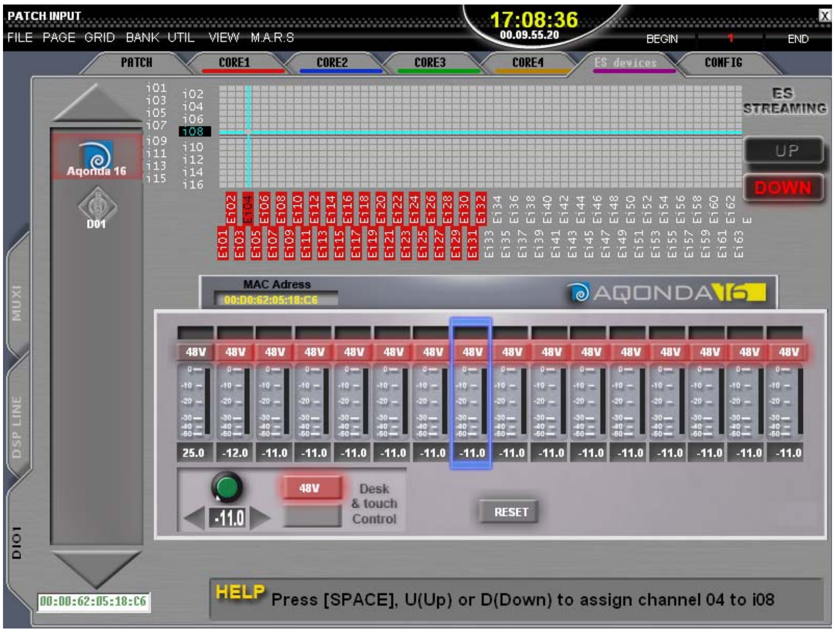
Connecting an Ethersound Device

In a standard network, insert each device into the middle of the chain. This keeps Eclipse as the Primary Master and M.A.R.S. as the last device:


DioCore
56 Mic pre-amps
8 processed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
UpStream
DownStream
Loop Back
64 audio channels for mix buses from the desk to Outputs cards or to the MARS recorder
DioEs
OUT
IN
MARS
OUT IN

⏩ To view your Ethersound devices:

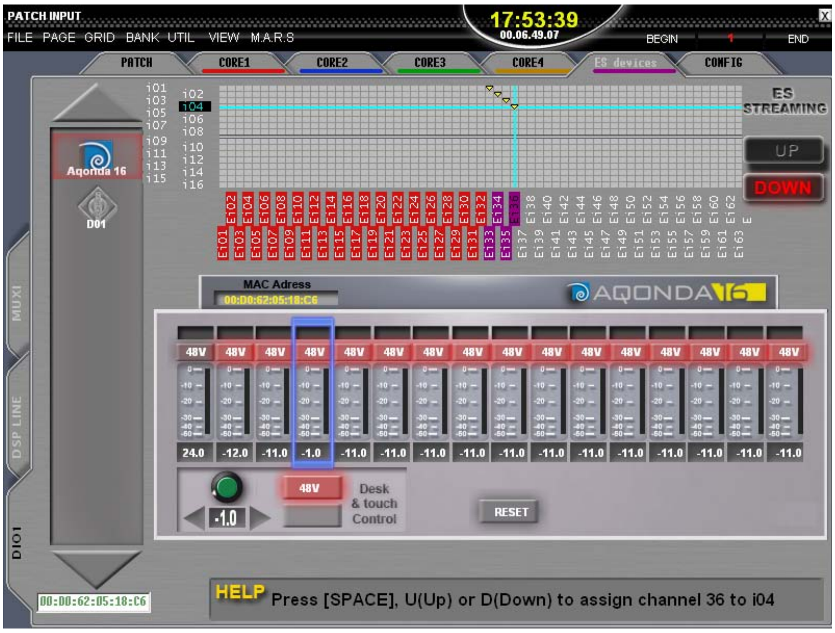
1. Select the **PATCH INPUT** display.
2. And select the **DIO1** and **ES devices** tabs.



HELP Press [SPACE], U(Up) or D(Down) to assign channel 04 to i08

On the left of the display you will see a list of the Ethersound devices which have been detected on your network. If a device is online, then its logo is in colour. If a device is offline, then its logo is greyed out. In our example, we have an Aqonda 16 online and a Neumann DMI-8 offline.

3. Click on a device logo to view its patching and graphical user interface (GUI):



HELP Press [SPACE], U(Up) or D(Down) to assign channel 36 to i04

Nova supports remote control of the following devices via an on-screen GUI:

- **Aqonda 16** – manufactured by Digigram.
- **DMI-8** – manufactured by Neumann
- **SR-16** – manufactured by Innovason.

Other Ethersound devices can be patched from the **PATCH INPUT** and **PATCH OUTPUT** displays, but their parameters cannot be remotely controlled from the Nova software.

4. In our example, any of the Aqonda’s 16 inputs can be patched to the 64 Ethersound channels feeding the console, see Page 268.
5. The GUI provides remote control of 48V phantom power and analogue input gain for any of the 16 inputs.

Control from the Console

To integrate the Aqonda further, you must assign an input from the unit to an Ethersound channel, and the Ethersound channel to a fader. Having done so, you will be able to adjust phantom power and input gain within the Aqonda from the 48V button and Gain control on the console surface.

Note

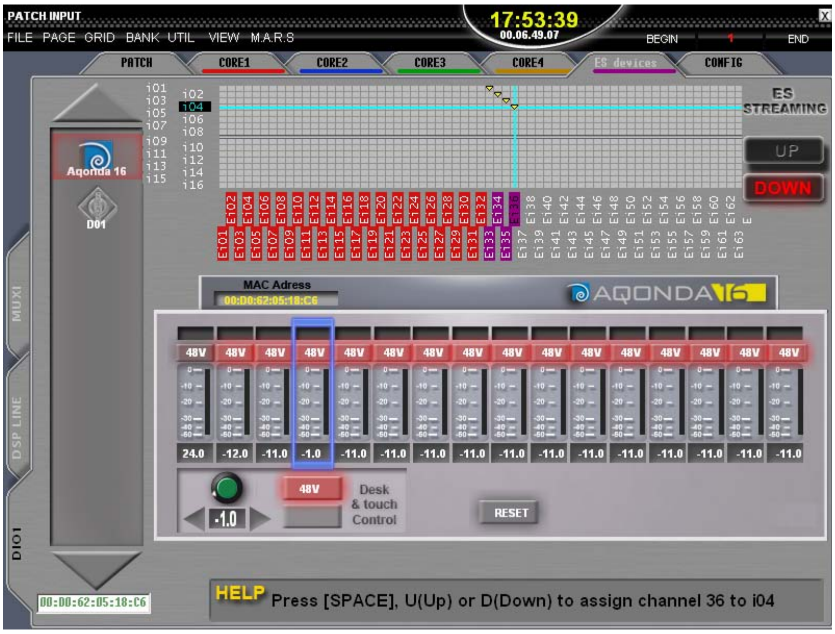
Note that this level of integration is supported for the Aqonda 16, DMI-8 and SR-16. The exact parameters depend on the device. We will use the 16 in/16 out Aqonda as an example. Other Ethersound devices can be patched to Ethersound channels but Nova does not offer remote control of parameters.

⏩ Patching an Ethersound device

1. Select the **PATCH INPUT** display.
2. And select the DIO1 and ES devices tabs.
3. Patch the channels of the device to some spare Ethersound channels – in our example, Aqonda inputs 1 to 4 to Ethersound channels 33 to 36.

Take care to select the correct Ethersound streaming (up or down) depending on your network configuration, see Page 264.

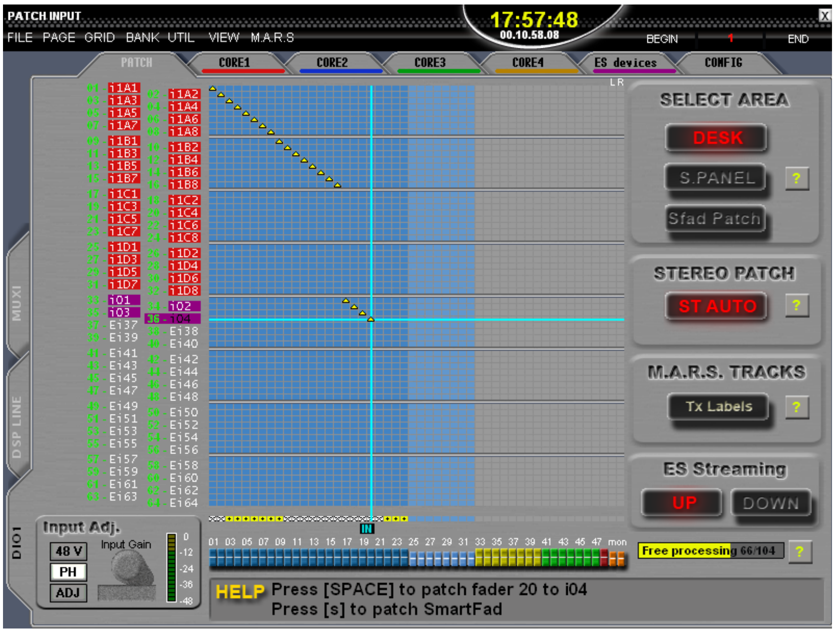
The used Ethersound channels turn purple to indicate that they are coming from an ES device:



MAC Adress 00:D0:62:05:18:C6

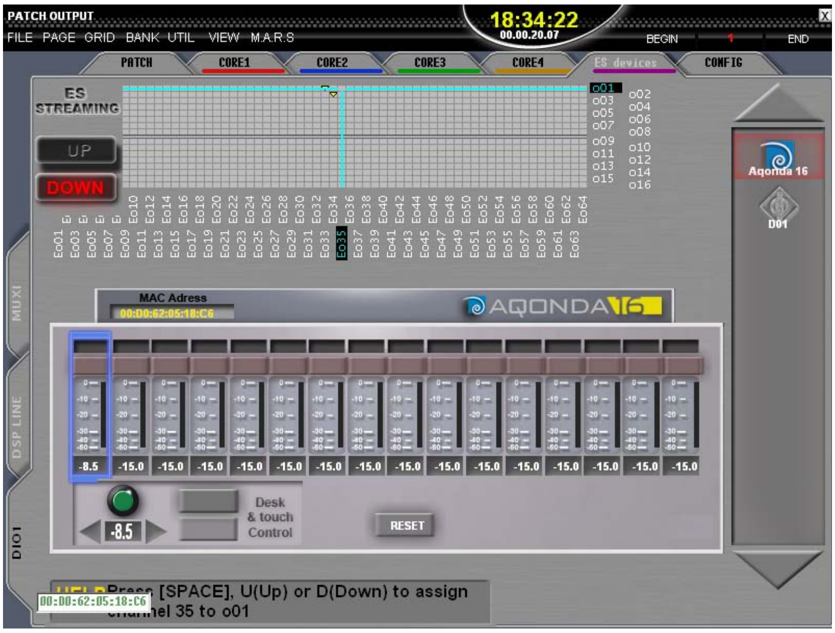
Press [SPACE], U(Up) or D(Down) to assign channel 36 to i04

4. Now select the **PATCH** tab.
5. And patch the Ethersound channels to faders on the console:



HELP Press [SPACE] to patch fader 20 to i04
Press [s] to patch SmartFad

6. If the device has outputs, then repeat the process from the **PATCH OUT** display to assign Ethersound channels to their destinations:



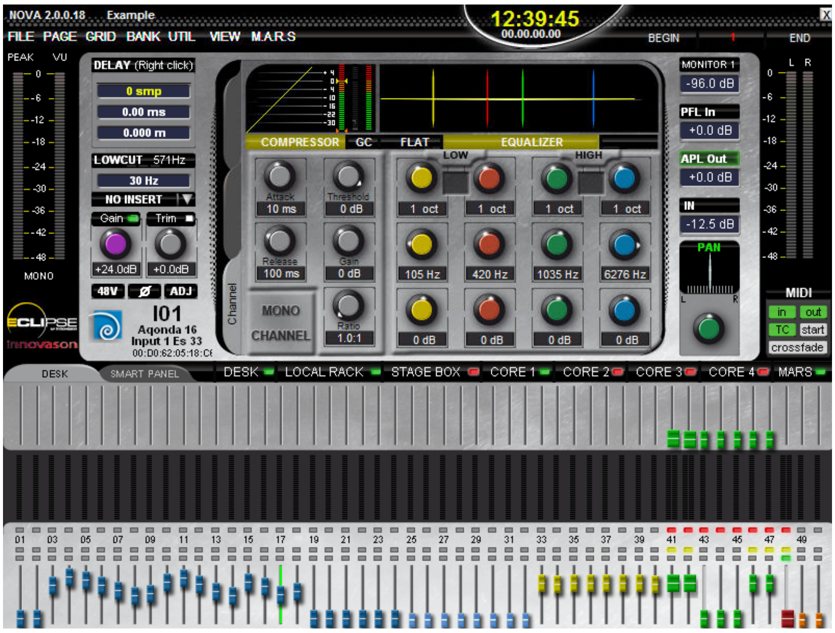
Press [SPACE], U(Up) or D(Down) to assign channel 35 to o01

⏩ Controlling Ethersound devices from the Console

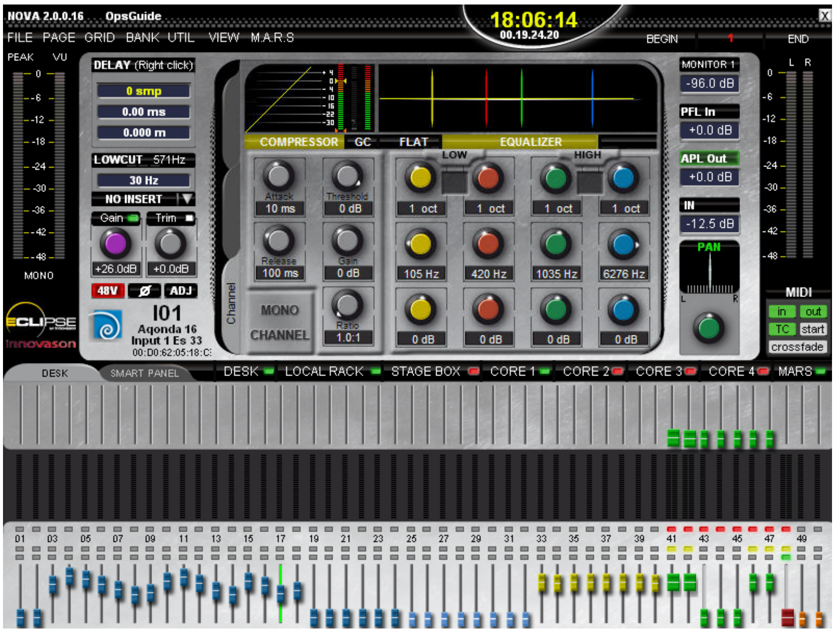
1. Press **SEL** on one of the faders assigned from the Aqonda.

On the Main Mix display, the Aqonda logo appears beside the channel label. The logo is in colour for an online device.

In addition, the Gain control is coloured purple. This indicates that it will remotely control gain within the Ethersound device:



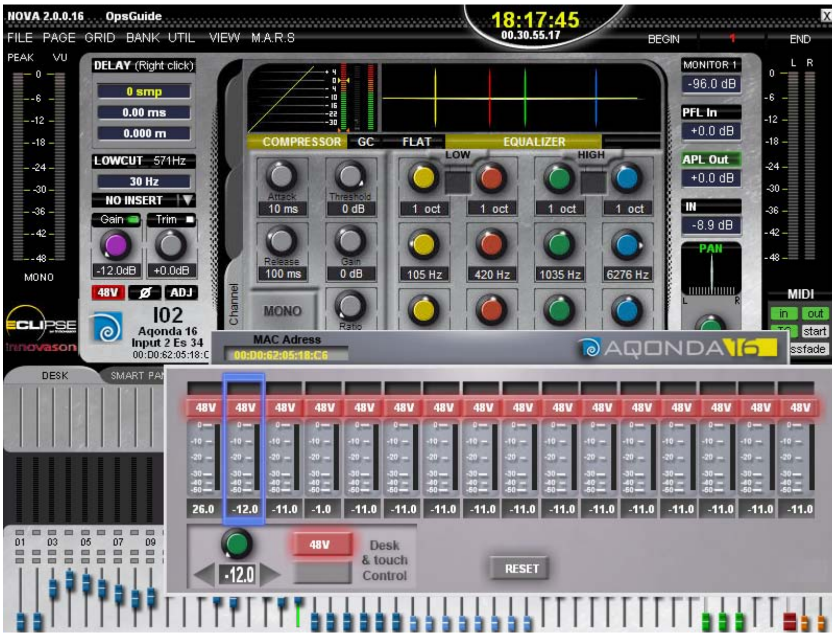
2. Now on the Eclipse control surface, press **48V** or adjust the **Analog Gain** control (from the INPUT panel).



You are now remotely controlling parameters within the device.

3. For more visual feedback, click on the Aqonda logo.

The full GUI control panel opens as a floating window:



You can position this window anywhere within the Main Mix display, and use the GUI to control parameters for the selected channel.

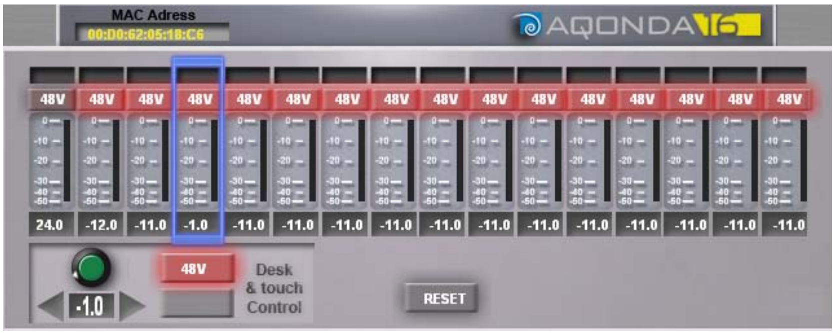
Note

For safety, only the selected channel can be controlled from the Main Mix display. If you wish to remotely control settings on other channels, either press **SEL** on the correct fader or return to the **PATCH IN** display and select the **DIO1** and **ES Devices** tabs.

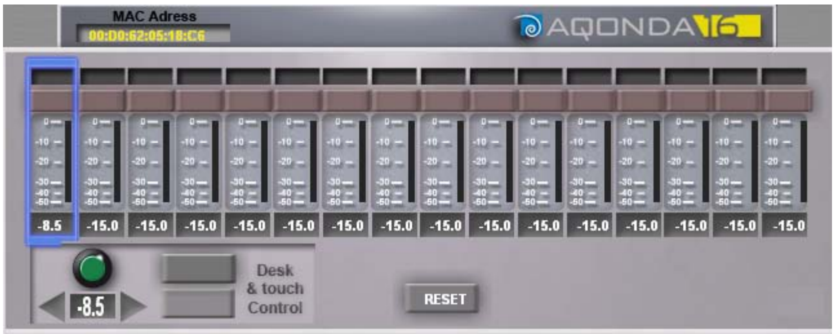
Supported ES Devices

⏩ Aqonda 16

The Aqonda 16 features 16 mic preamp inputs with remote control of 48V and gain:



In addition, it has 16 outputs with remote control of analogue output gain:

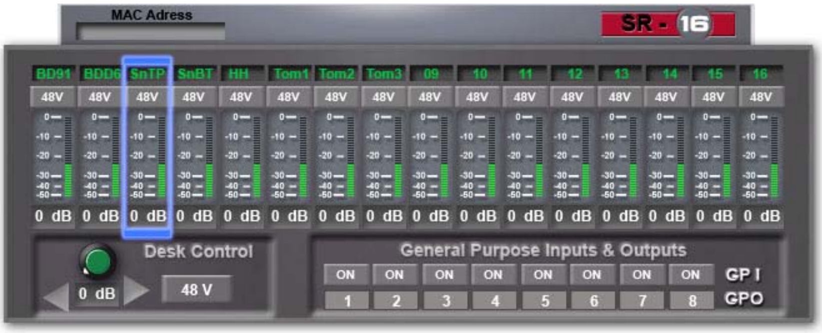


Note

Note that the Aqonda also contains GPIs; these are represented on the GUI but cannot be adjusted from the software.

⏩ SR-16

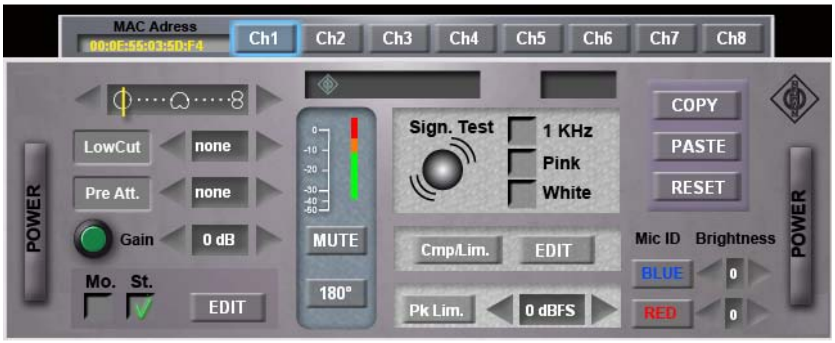
The SR-16 also has 16 mic preamp inputs and 16 outputs. Similar parameters can be controlled to those shown above.



⏩ DMI-8

The DMI-8 features 8 AES42 inputs for connection to any AES42 compatible digital microphone.

The GUI provides control of many parameters including **POWER** on/off, input Gain, mono/stereo, directivity pattern, signal test, etc.:



MAC Adress 00:0E:55:03:5D:F4

LowCut none

Pre Att. none

Gain 0 dB

Mo. ☐ St. ☑

Pk Lim. 0 dBFS

Mic ID BLUE Brightness 0

RED 0

Input Gain can be controlled from the console front panel, once the DMI-8 is patched to a Fader strip or Smart Panel controller.

You can also Copy and Paste settings from one channel to another using the on-screen **COPY** and **PASTE** buttons.

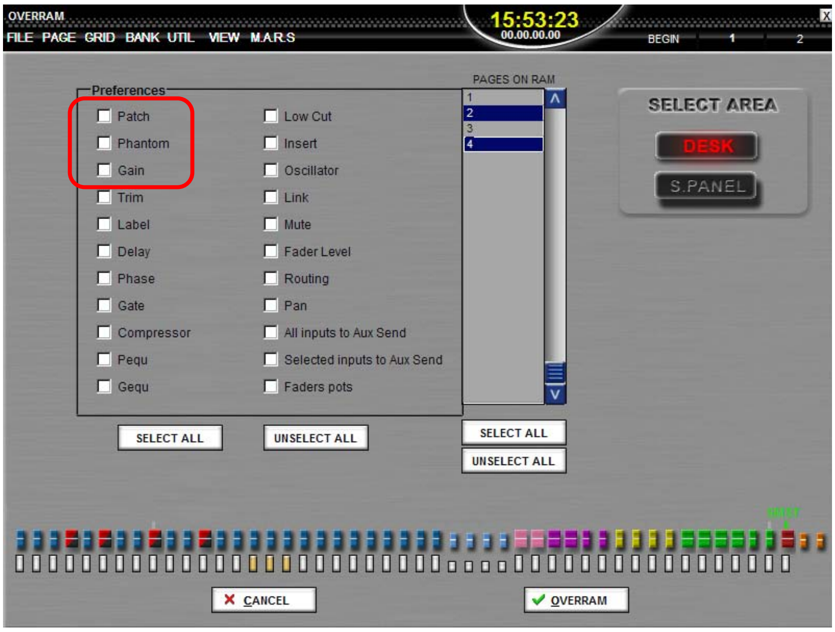
Click on **RESET** to reset the channel to its default parameter values.

Saving and Loading ES Device Parameters

The patching and parameter settings for ES Devices are saved in a Page. This allows you to recall settings using the Next and Previous Page buttons, see Chapter 7.

Over Ram

Gain, phantom power and patching can be selected from the **Over Ram** display:



This allows you to write ES device parameters from the selected channel or channels into other Pages in RAM.

Note

Note that only console-controlled parameters, such as gain and phantom power, can be selected for Over Ram; you cannot Over Ram GUI-controlled parameters such as the directivity of the DMI-8.

Offline Setup

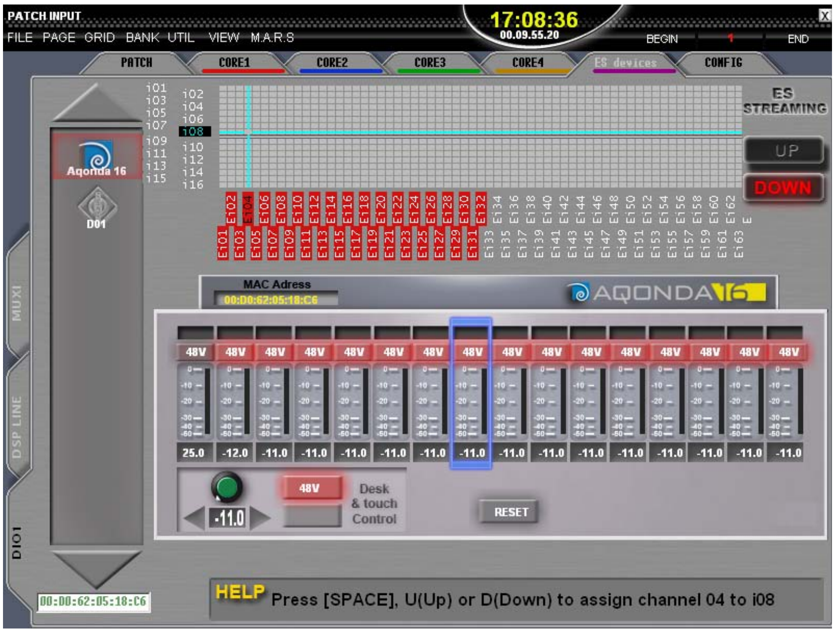
An Ethersound device must be online in order to configure its patching and parameters. If a unit is disconnected, then its last known parameters are saved when you save.

If you load a File which was saved with an ES device connected, then the device parameters are recalled but the device will appear offline.

Deleting an ES Device

To delete a device:

1. Select the **PATCH INPUT** display.
2. And select the **DIO1** and **ES devices** tabs.



HELP Press [SPACE], U(Up) or D(Down) to assign channel 04 to i08

3. Select the device logo from the list on the left of the display.
4. Then press [**DEL**] on the keyboard.
5. Press **OK** to confirm the delete.

Note

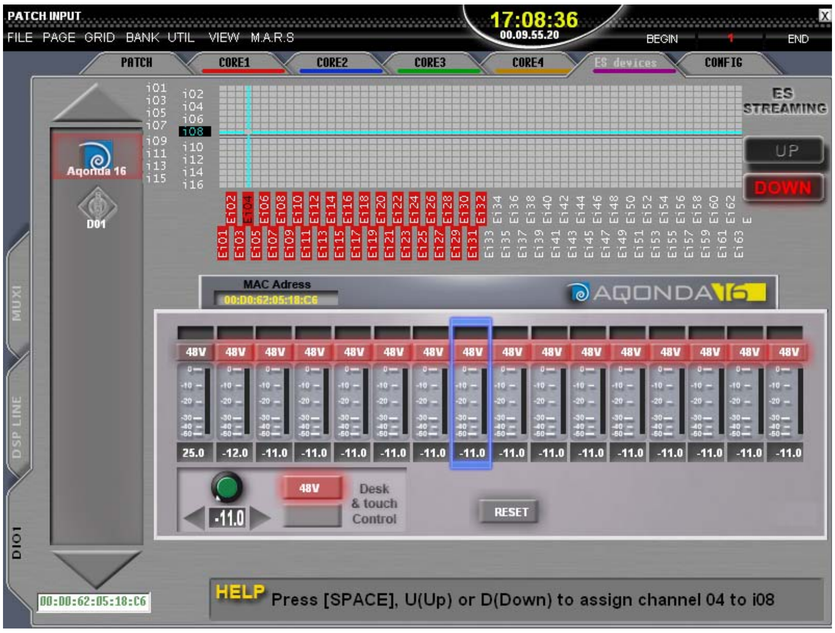
Note that you cannot delete a device which is online. You must disconnect the device from the Ethersound network and then perform the delete operation.

Copying ES Device Parameters

You can copy the complete settings from one ES device to another of the same type (e.g. Aqonda 16 to Aqonda 16).

This can be useful for quickly configuring settings. Or, if a device fails and you have a backup unit, you can copy all the settings from the failed device to the replacement unit:

1. Select the PATCH INPUT display.
2. And select the DIO1 and ES devices tabs.



MAC Adress: 00:D0:62:05:18:C6

HELP Press [SPACE], U(Up) or D(Down) to assign channel 04 to i08

3. On the left of the display, click on the logo of the device you wish to copy, and drag it onto the replacement unit's logo. Then release.

Note

Note that the two devices must be of the same type; you cannot copy settings from an Aqonda 16 to a DMI-8!

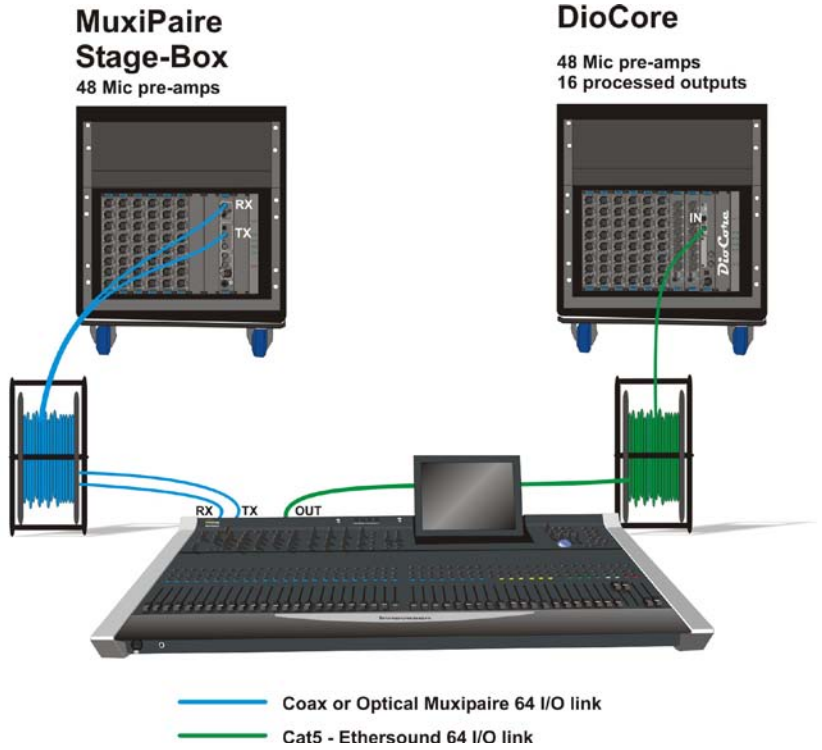
4. A confirmation dialogue appears.
5. Click **OK** to confirm the copy.

The parameters are copied.

The Muxipaire Stagebox

Although multiple Ethersound devices can be accessed by one console, the Ethersound network will only be able to send 64 input signals to and from the console(s).

If you wish to handle more than 64 mic inputs from the stage, you will need to complement the DioCore with a Muxipaire Stage-Box:



This StageBox works in parallel with the **A** to **H** slots at the rear of the console.

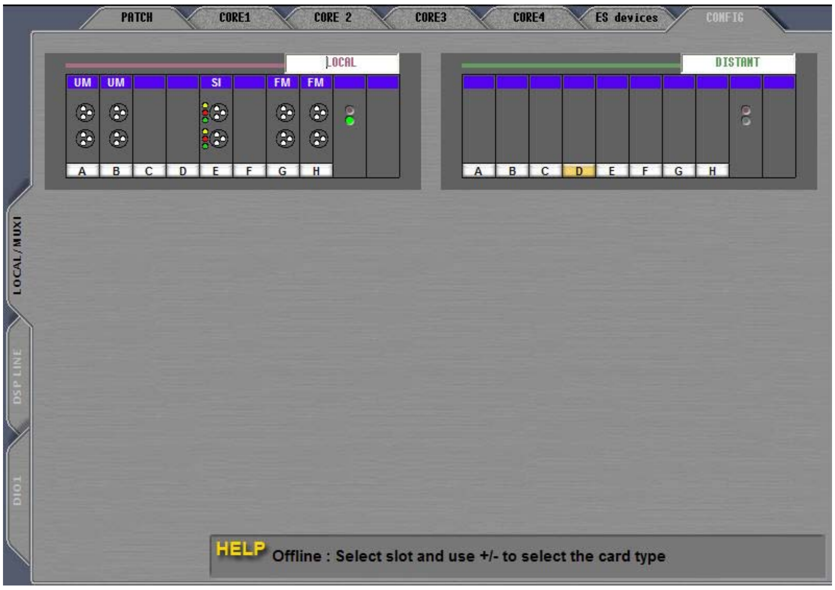
Note

Note that you can fit an input card to Stagebox slot A *and* an output card to the console slot A. But you *cannot* fit input cards to both slots, or output cards to both slots without a conflict. Therefore, in order to add a StageBox, you may need to remove local I/O from the console.

MUXI Configuration

To view the I/O card configuration within the Muxipaire interfaces:

1. Select the **LOCAL / MUXI** or **DSP LINE** tab on either the **PATCH INPUT** or **PATCH OUTPUT** displays.
2. Then click on the **CONFIG** tab:



HELP Offline : Select slot and use +/- to select the card type

If the console (and Stagebox) are powered and connected, then the Nova software automatically detects the card configuration:

- **Local** – these are the I/O cards fitted at the rear of the console.
- **Distant** – these are I/O cards fitted within a remote Stagebox.

If you are working offline, you can prepare a Muxipaire card configuration in the same way as for a DioCore. See Page 270.

Please see the “Eclipse Technical Manual” for further details on the StageBox option.

Patch Grids: Input and Output Names

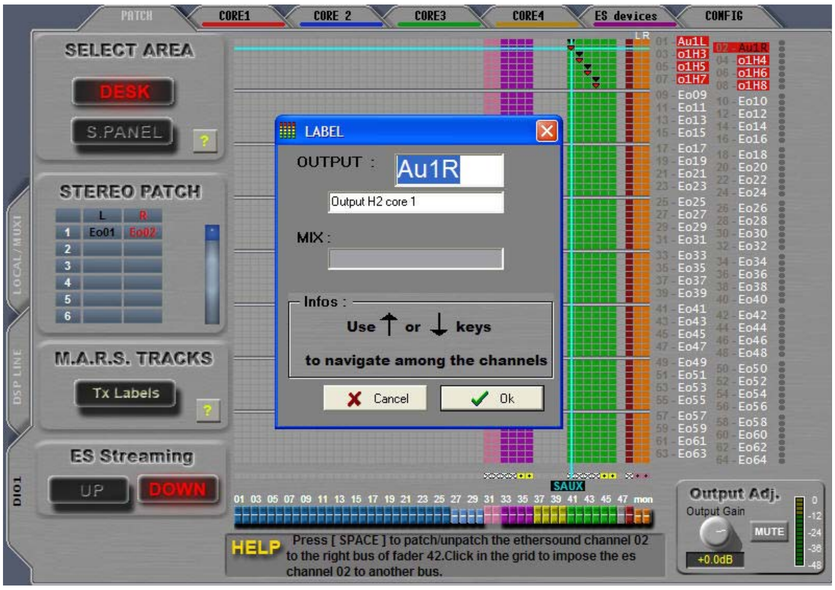
Each physical source and destination can be named from the **PATCH INPUT**, **PATCH OUTPUT** or **PATCH DIRECT** displays.

Once a source is patched to an input channel, or a destination patched from a mix bus, the user Label on the Fader strip or Smart Panel shows the name of the source or destination.

To name an input or output from the **PATCH IN** or **PATCH OUT** displays:

1. Select the source, or destination, and press [**F3**] on the console keyboard.

The input, or output, LABEL window appears:



LABEL

OUTPUT : Au1R

Output H2 core 1

MIX :

Infos :
Use ↑ or ↓ keys
to navigate among the channels

Cancel
Ok

HELP Press [SPACE] to patch/unpatch the ethersound channel 02 to the right bus of fader 42.Click in the grid to impose the es channel 02 to another bus.

2. In the **INPUT**, or **OUTPUT**, field enter a new 4-character Label from the keyboard.
3. Below you can enter a longer alias (up to 16 characters) which is tied to the source or destination Label and will appear on the Main Mix display.
4. Confirm by pressing **OK**.

The Label appears on the **PATCH** display, and also on the console surface if the source or destination is patched to or from a Fader.

Tip

To Label multiple inputs, or outputs, press [**ALT**] + [**F3**]; each time you confirm a Label the next input or output is automatically selected.

Note that you can name both sources and destinations from the **PATCH DIRECT** display:

1. Select the crosspoint and press [**F3**] to Label the source.
2. Confirm with **OK**.
3. Now Label the destination and confirm with **OK**.

Default Patch Memories

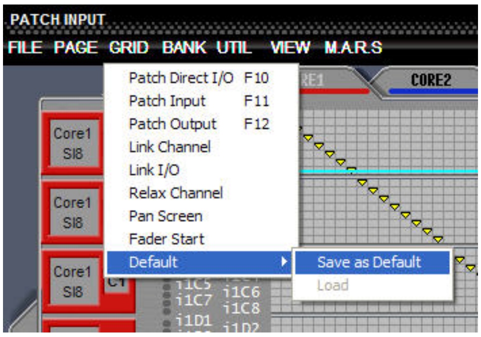
Within the **PATCH IN**, **PATCH OUT** and **PATCH DIRECT** displays, you can save a default memory which is independent of the current File and Page. You can use these memories to save default patching, I/O settings and Labels which can then be loaded back as the basis for a new show.

There is one default memory for each of the **PATCH** grid displays. So, you can save and load input patching independently from output patching.

The default memory saves all labels, input or output settings, such as 48V or mute, and the patch crosspoints for the grid display. When you load the default, you can then select which elements you wish to load – for example, you may wish to load default Labels but configure the patching manually.

To save the default memory:

1. Select “**GRID -> Default -> Save as Default**” from the Nova menus:



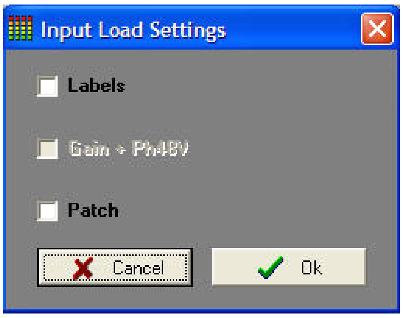
Note

This saves all labels, input settings and patch crosspoints into the **PATCH INPUT** default memory. Note that only one default memory is available so be sure before you overwrite any existing default settings.

To load back settings from the default memory:

1. Select “**GRID -> Default -> Load**” from the Nova menus.

You can only select this option if a default has been saved!



2. Select the settings you wish to load and press **OK**.

If settings are unavailable they are shown in white – in our example, there is no Gain or 48V for Ethersound channels.

Internal Effects (the FM-8VB Card)

Overview

Eclipse provides internal effects which you can insert directly into any input or output channel, or feed from an aux send and return into input channels, just as you would with an outboard effects device.

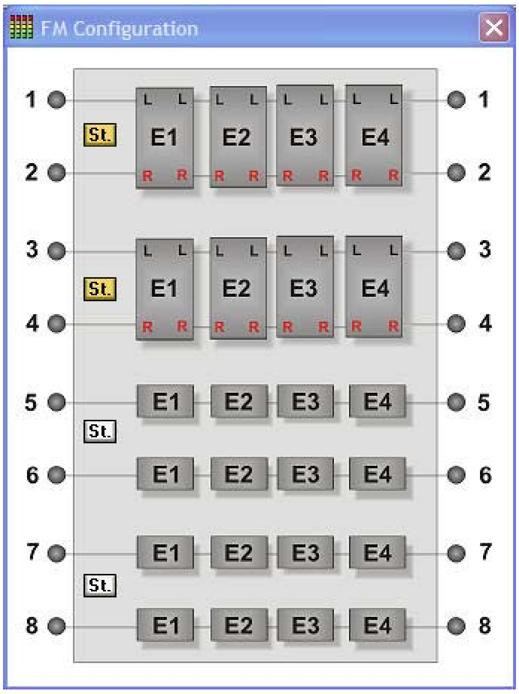
The advantages over an outboard device are:

- There is no external patching!
- You have convenient control of effects parameters from the console's Smart Panel and Main Mix display.
- All effects parameters and patching are recalled with the rest of your mix.

The effects processing is provided by the **FM-8VB** card. Two of these cards are fitted to the rear of the console as part of the standard **Eclipse** package. You may fit more cards (up to 6) providing you have spare slots in the rear of the console.

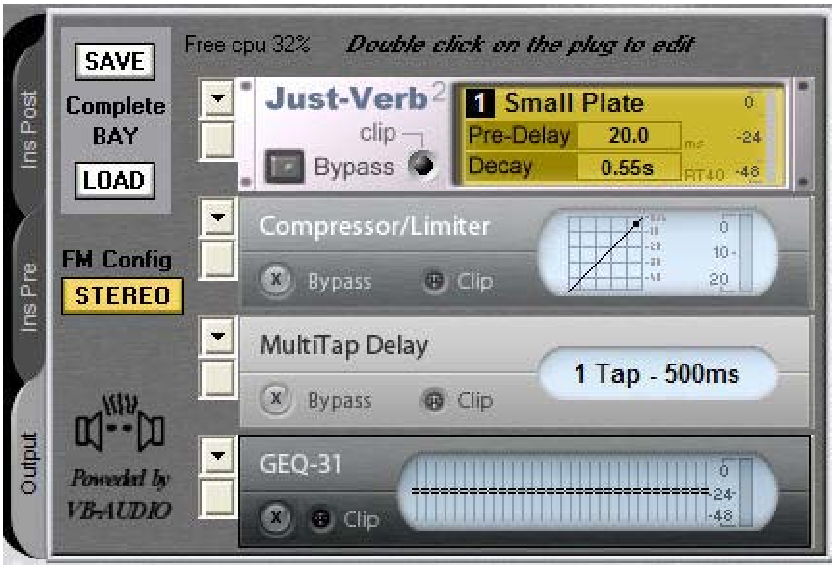
Each **FM-8VB** card is seen by the system as an 8 input and 8 output card which feeds 8 internal effects bays; there are no physical I/O connectors to or from an FM-8VB card.

Each bay can be mono, or you can configure a pair of bays for stereo operation. In other words, you can configure up to 8 mono effects, 4 stereo effects or any combination from each card:



Within each bay you can then assign up to four effects modules (**E1** to **E4**).

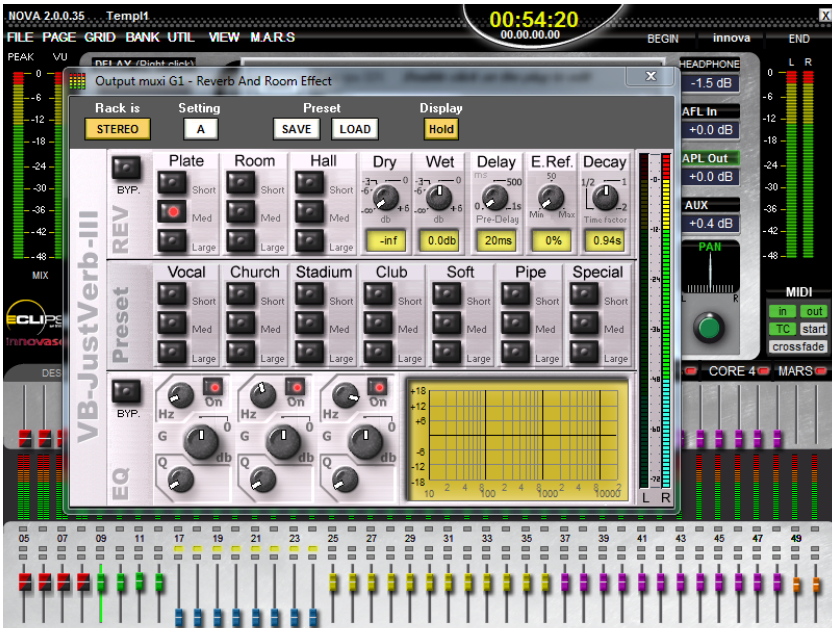
A VB Audio plug-in can be assigned to each module, and the four modules are daisy-chained from top to bottom as shown below. Available plug-ins include Reverb, Echo, Chorus, Flanger, De-esser, Compressor, Gate and a Multi-band Compressor:



Note

Note that some plug-ins use more DSP resource than others. For example, you may assign up to 8 de-essers but only 4 JustVerbs from each FM8-VB card.

Once assigned, you can control each effects module from the console's Main Mix display by double-clicking on it. For example, here is the **Just-Verb^2** plug-in Editor:



You can also assign the module's controls onto the Smart Panel so that you can adjust effects parameters from physical controls.

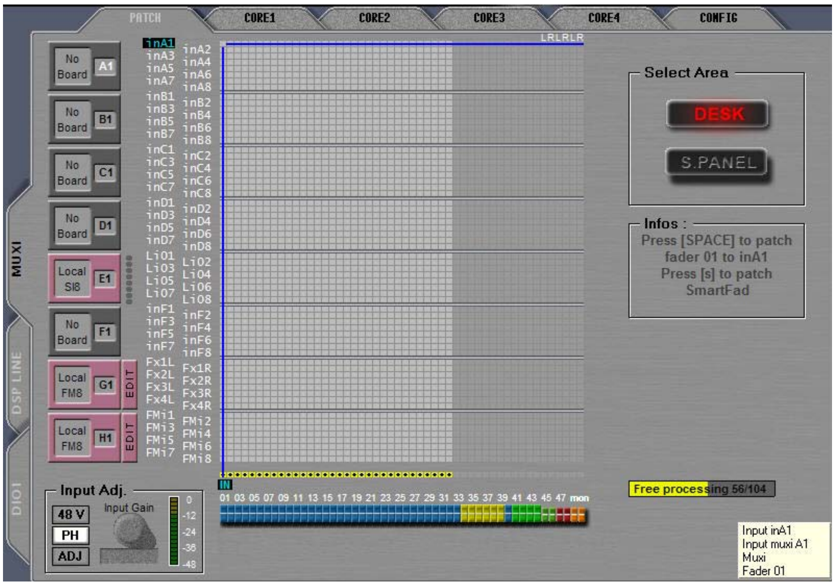
Configuring Mono or Stereo Effects Bays

Before you patch any internal effects, it is a good idea to decide which bays will be mono and which stereo. Note that you can also change the mono/stereo status from the Main Mix display once your patching is complete, see Page 298.

	Patch IN (UTILITIES)
	“GRID -> Patch Input”
	[F11]

1. Open the **PATCH IN** (or **PATCH OUT)** grid.
2. Select the **LOCAL / MUXI** tab to view the eight Muxipaire interface slots (at the rear of the console).

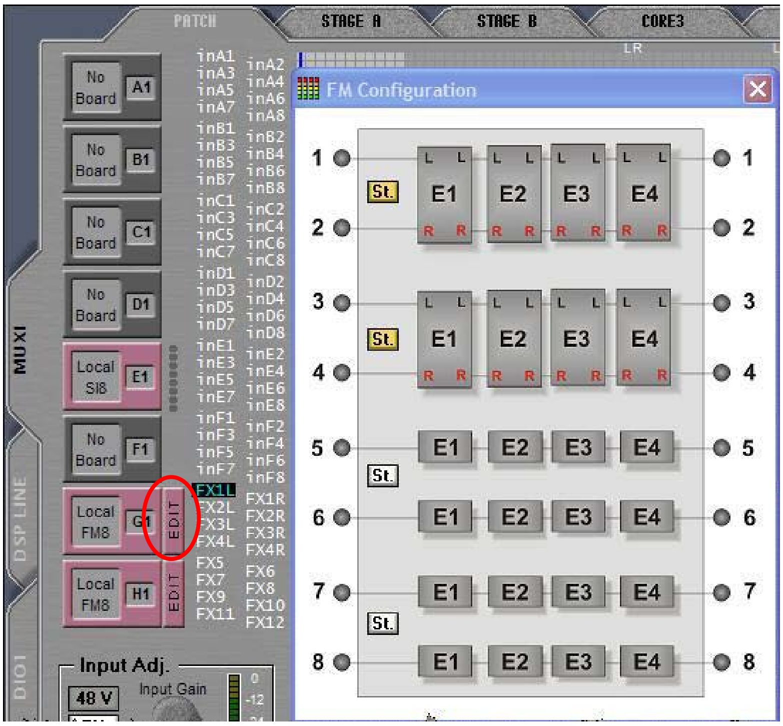
In our example, the last two slots are fitted with **Local FM8** (FM-8VB) cards:


PATCH
CORE1
CORE2
CORE3
CORE4
CONFIG
MUXI
DSP LINE
DIOI
No Board A1
No Board B1
No Board C1
No Board D1
Local SI8 E1
No Board F1
Local FM8 G1 EDIT
Local FM8 H1 EDIT
inA1 inA2 inA3 inA4 inA5 inA6 inA7 inA8
inB1 inB2 inB3 inB4 inB5 inB6 inB7 inB8
inC1 inC2 inC3 inC4 inC5 inC6 inC7 inC8
inD1 inD2 inD3 inD4 inD5 inD6 inD7 inD8
Li01 Li02 Li03 Li04 Li05 Li06 Li07 Li08
inF1 inF2 inF3 inF4 inF5 inF6 inF7 inF8
Fx1L Fx1R Fx2L Fx2R Fx3L Fx3R Fx4L Fx4R
FMi1 FMi2 FMi3 FMi4 FMi5 FMi6 FMi7 FMi8
LRLRLR
Select Area
DESK
S.PANEL
IN
01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 mon
Free processing 56/104
Input Adj.
48 V
PH
ADJ
Input Gain
0
-12
-24
-36
-48

Infos :
Press [SPACE] to patch fader 01 to inA1
Press [s] to patch SmartFad

Input inA1
Input muxi A1
Muxi
Fader 01

3. Click on the **EDIT** button to open the **FM Configuration** window for the first card:



4. Now click on **St.** to change the configuration of each input/output pair from mono (white) to stereo (yellow).

In our example, inputs and outputs 1&2 and 3&4 on the selected card are configured as stereo bays while 5 to 8 are mono bays.

E1 to **E4** represent the four effects engines provided by each bay. These are a graphical representation only; you cannot assign your effects modules from here.

Patching the Internal Effects

You can use any of your internal effects bays as you would an outboard device.

So, to feed a mix of channels to an effect and bring the return back to your master or other output busses, you should use an aux send and create some effects return input channels.

Alternatively, to insert the effect on a single channel or bus, you can insert the effects bay directly into the input or output channel.

Here we will deal with the use of an aux send and effects return. For details on inserting an effects bay see Page 309.

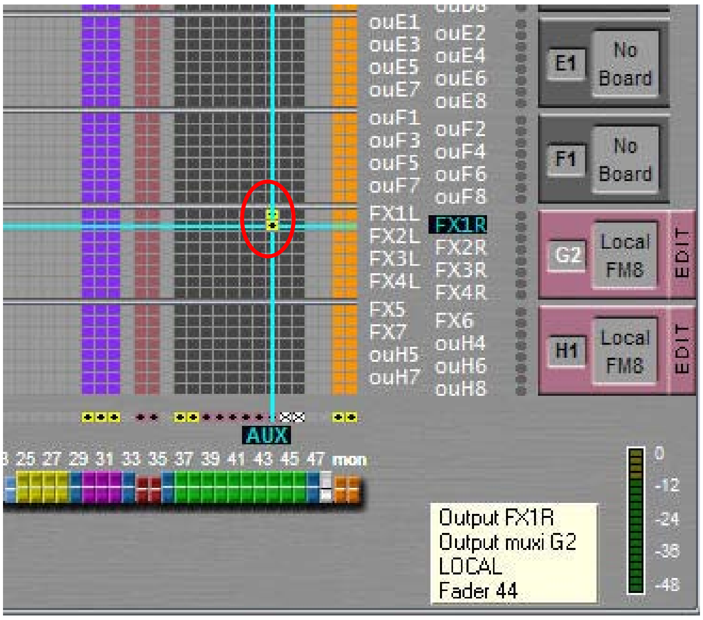
Patching an Aux Send and Effects Return

In our example, we are going to patch a stereo effects bay from a mono auxiliary and return the effect to a stereo input channel:

1. Open the **PATCH OUT** grid.
2. Select the **LOCAL / MUXI** tab and locate the **Local FM8** card which is providing the stereo effects bay.

We are using a card fitted to slot **G** where the first two outputs to the card (**G1** and **G2**) have been named **FX1L** and **FX1R.**

3. Patch the mono AUX (in our example, Fader 37) to both inputs of the stereo bay:



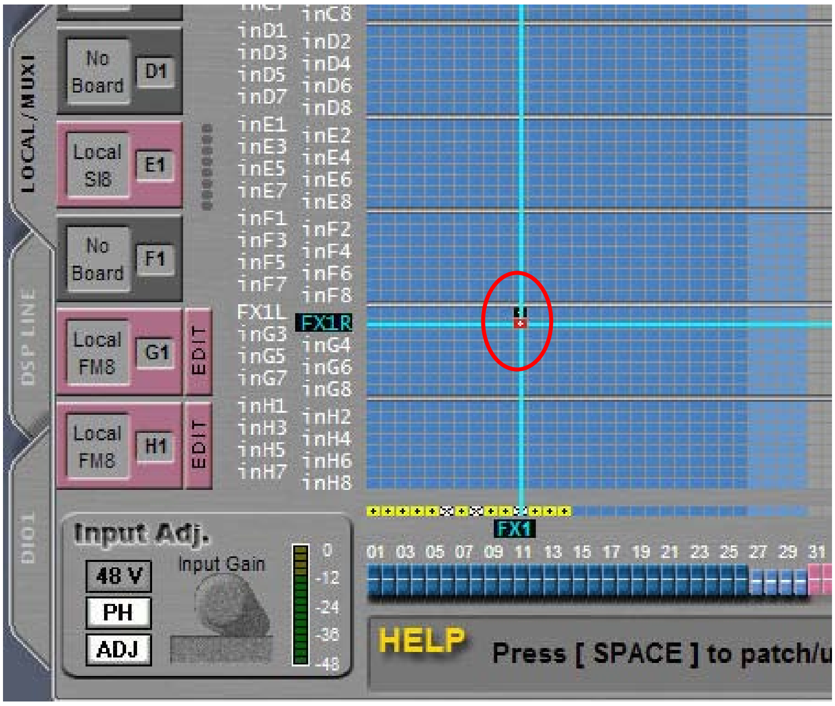
Output FX1R
Output muxi G2
LOCAL
Fader 44

Remember to patch the mono aux to *both* sides of the stereo effects bay. If you don't you will get strange results from your stereo effect!

Note

4. Now open the **PATCH OUT** grid and select **LOCAL / MUXI**.

5. Using the stereo patching method described on Page 238, patch the left and right returns of the **Local FM8** card to an input fader:


LOCAL / MUXI
DSP LINE
DIO1
No Board
D1
Local SI8
E1
No Board
F1
Local FM8
G1
EDIT
Local FM8
H1
EDIT
inD1 inD2 inD3 inD4 inD5 inD6 inD7 inD8
inE1 inE2 inE3 inE4 inE5 inE6 inE7 inE8
inF1 inF2 inF3 inF4 inF5 inF6 inF7 inF8
FX1L FX1R inG3 inG4 inG5 inG6 inG7 inG8
inH1 inH2 inH3 inH4 inH5 inH6 inH7 inH8
FX1
01 03 05 07 09 11 13 15 17 19 21 23 25 27 29 31
Input Adj.
48 V
PH
ADJ
Input Gain
0
-12
-24
-36
-48
HELP
Press [SPACE] to patch/u

You should see red and black crosspoints indicating your left and right connections.

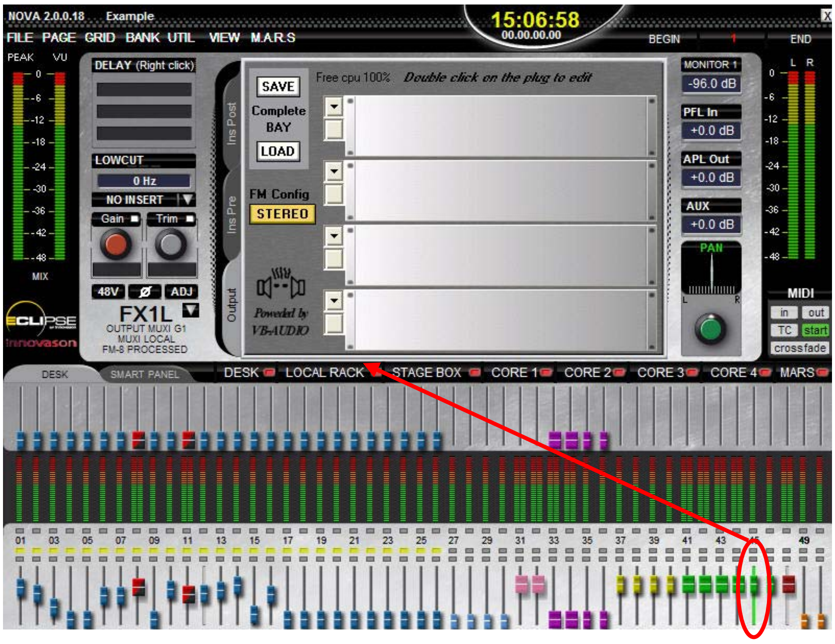
Verifying Your Patching from the Main Mix Display

Tip

Before moving on it is a good idea to verify your patching from the Main Mix display:

1. Select the fader, or Smart Panel controller, assigned to your Aux by pressing its **SEL** button.

The upper half of the Main Mix updates to show parameters for the selected channel:

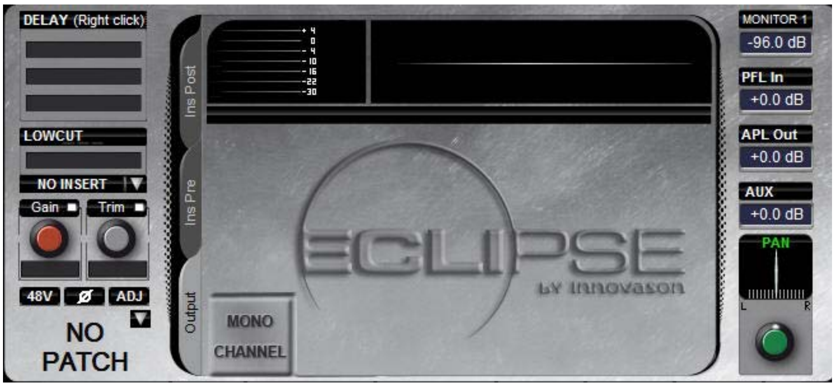


2. Select the **Output** tab to view the output processing.

If you have patched the aux to the FM8-VB card correctly, then you will see the racks of the effects bay as shown.

Note

If you do not see the effects racks, then either the aux is not patched to an FM8-VB card:

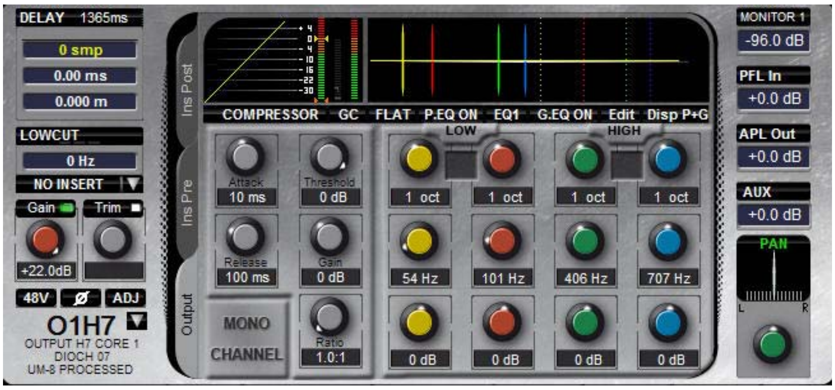


Or the aux may be patched to multiple destinations. To check:

3. Press the **SEL** button on the Aux fader (or Smart Panel Controller) to step through the processing for each output.

Our aux is patched to three outputs and therefore we can cycle through three different displays:

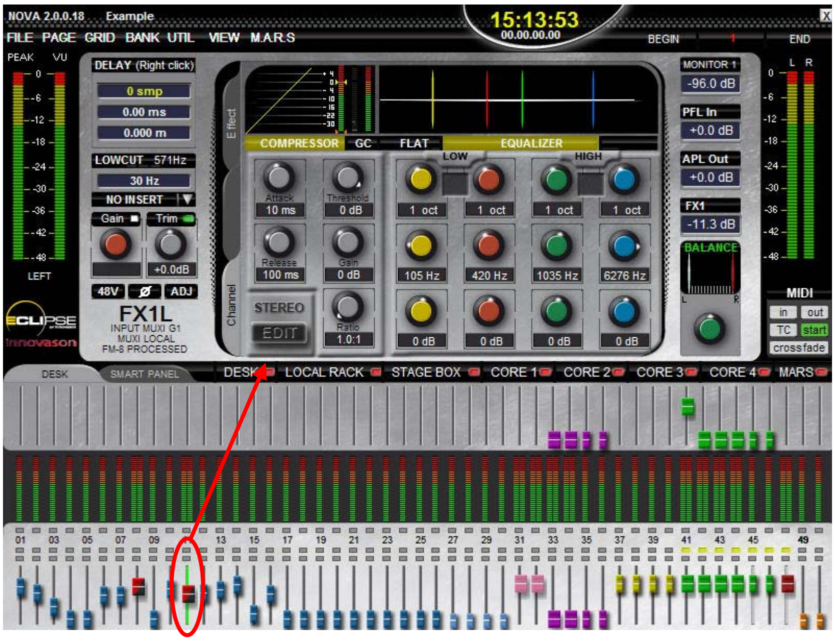
- **FX1L** – as shown above.
- **FX1R** – the right output to the FM8 card. Provides access to the same stereo effects bay as **FX1L**.
- **OutputH7** – the output of a UM-8PO card which has Compressor, EQ, etc.:



You can check your effects return patching in a similar manner:

4. Select the fader, or Smart Panel controller, assigned to your effects return channel by pressing its **SEL** button.

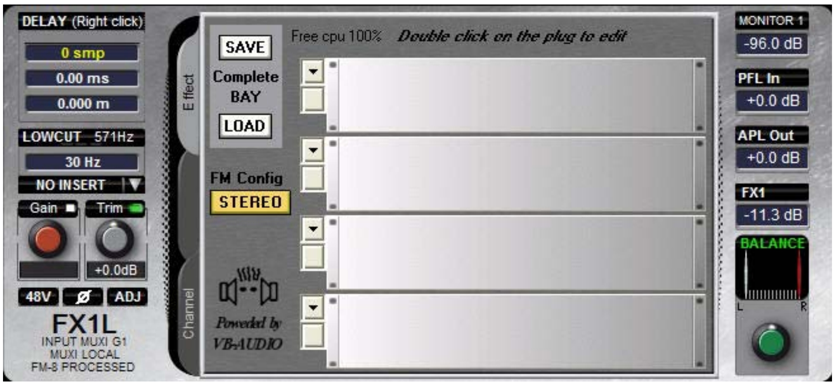
The Main Mix updates – in our example, the input named ***FX1L****:*



5. With the **Channel** tab selected, you can view and control the input channel signal processing – compressor, gate, parametric EQ.

6. Select the **Effect** tab to view and control the effects processing provided on the FM8-VB card.

If the input has been patched from the FM8-VB card correctly, then you will see the racks of the effects bay:



Note

Note that this is the same effects bay as accessed from the Aux on the previous page. This is because the aux is sending to, and the input returning from, the same internal effects bay.

If you do not see any effects racks, then there is a problem with the effect return patching. Check the **PATCH IN** grid to correct any mistakes.

Rules for Mono and Stereo Sends/Returns

Our example patched a stereo effects bay from a mono auxiliary. However, you can deal with other combinations of mono and stereo sends/returns as follows:

- You may patch a mono aux to a mono effects bay and return the effect on a mono input channel.
- To use a mono aux with a stereo effects bay, patch the aux to both the left and right inputs of the stereo bay. Return the effect to a stereo input channel.
- To use a stereo aux with a stereo effects bay, patch the Aux left output to the left input of the effects bay and Aux right to the right. Return the effect to a stereo input channel. Pan your source channels to the effects modules using the aux send pan. Remember that aux panning may either follow the main channel pan or be independent. See Page 164 for details.

Assigning Effects Plug-ins

Having patched the internal effects bay you can now assign the VB Audio plug-ins as follows:

From the Main Mix display, select your channel and access the effects.

Remember that if you are using an Aux send and Effects Return you can either:

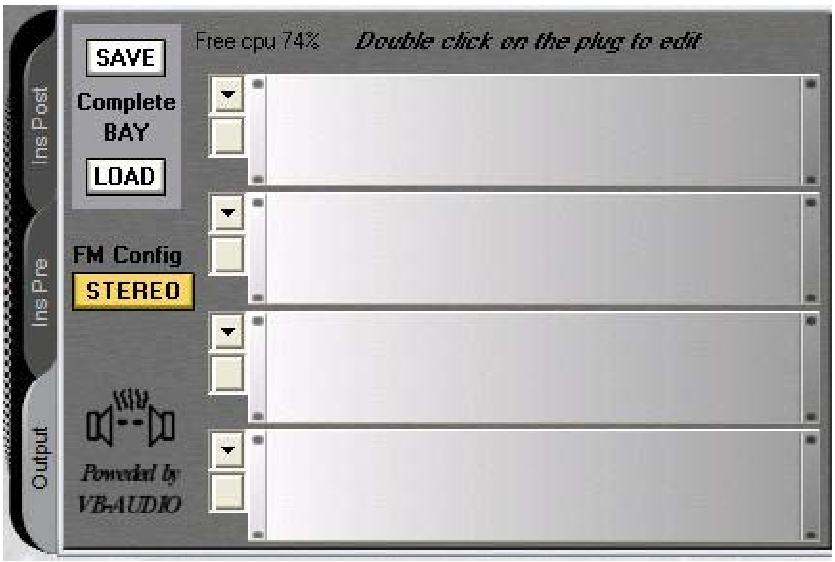
- Select the Aux fader and the **Output** tab.
- Or select an effects return input and the **Effect** tab.

Note

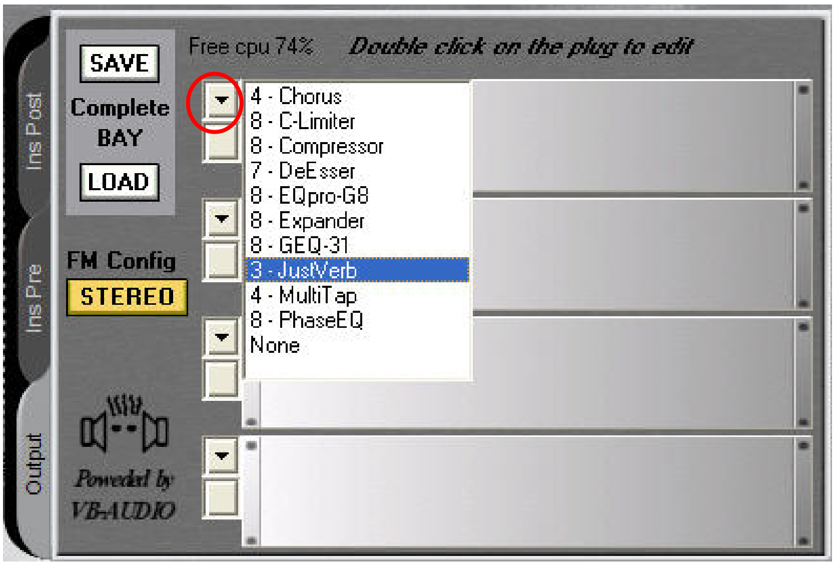
Note that if you have inserted effects processing, then select the **Ins Pre** or **Ins Post** tab to view the pre or post fader inserted processing.

1. In our example, press **SEL** on the Aux fader and click the **Output** tab.

As nothing has been assigned, the four racks are empty:



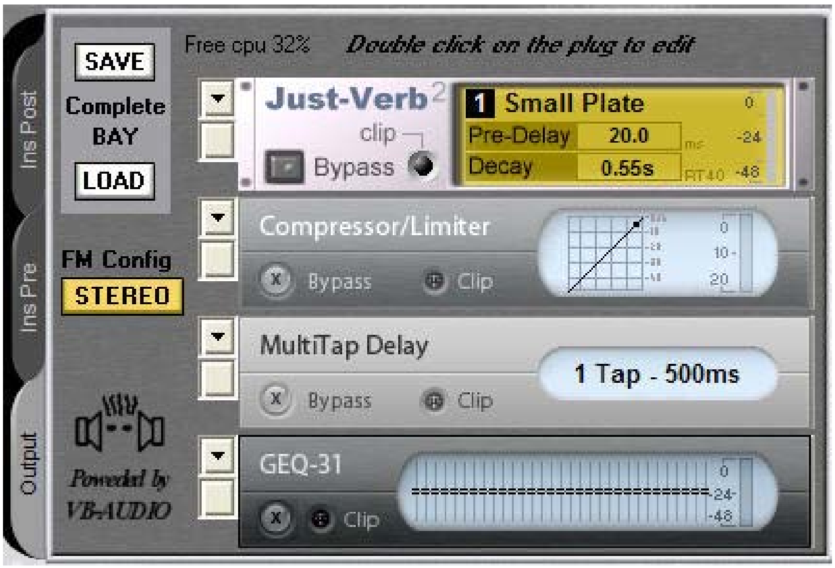
2. Click on the down arrow to the left of the first rack and select a plug-in from the drop-down menu:



Note that the number before each plug-in indicates the number of effects resources left on the FM8-VB card. In our example, we can assign another 4 Chorus, 8 C-Limiters, 8 Compressors, 7 De-Essers, etc. from this FM8 card.

Note

3. Double-click on the plug-in name or press [**Enter**] to make the assignment.
4. Repeat to assign the other effects plug-ins as required:



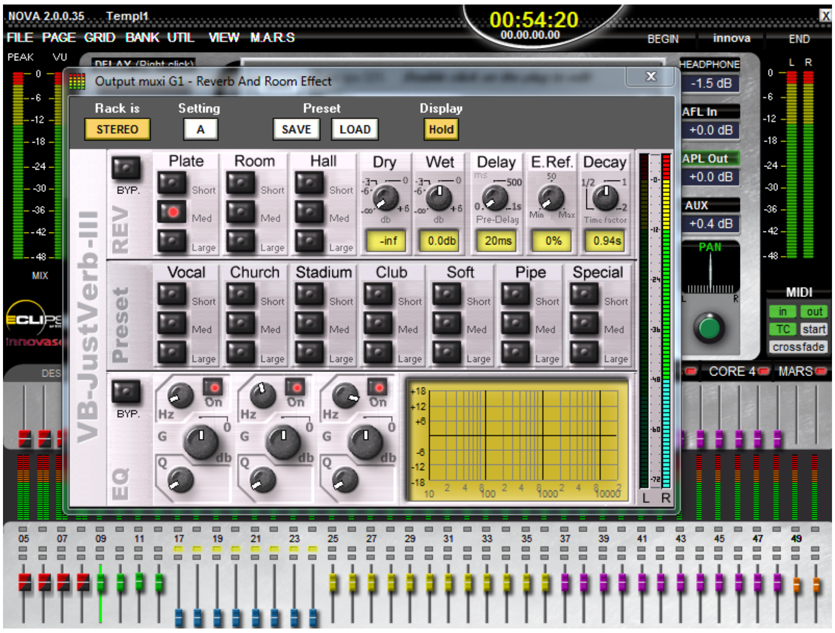
The effects modules are daisy chained from top to bottom as shown on the display.

5. If you need to remove a plug-in, select **None** from the bottom of the plug-in selection list.

You can assign plug-ins in any configuration up to the limits shown on the display. This means that you can assign the same plug-in to multiple racks if you wish.

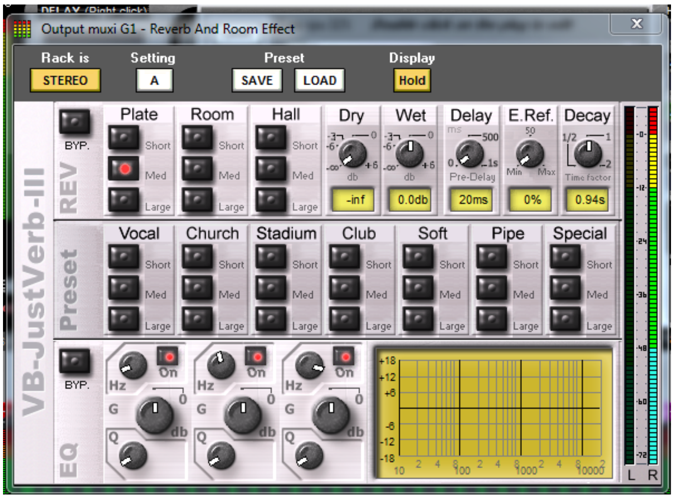
Controlling Effects Parameters

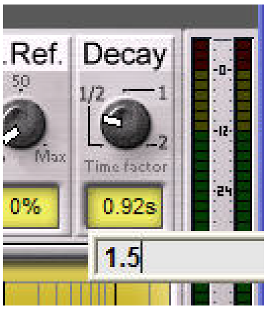
1. Once a plug-in is assigned, double-click on it to open the Effects Editor window:



You can open multiple windows and position them as you wish over the Main Mix display.

Details of all available plug-ins are included in Appendix A. Here we will use the **Just-Verb²** plug-in as an example:



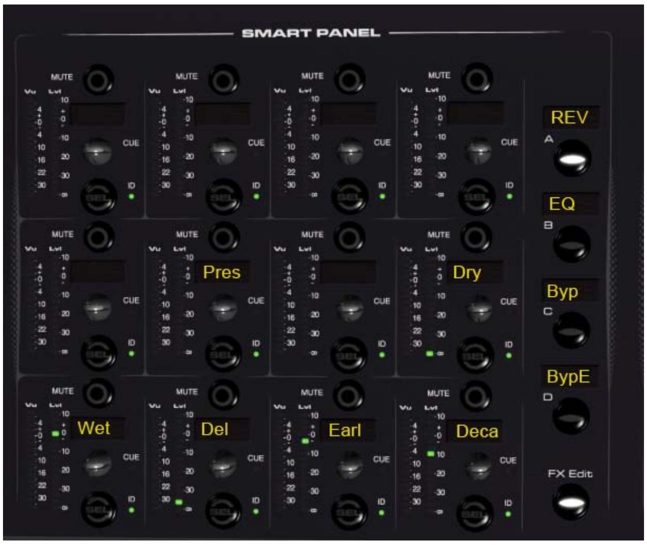


2. To adjust the parameters:

- Click or touch the on-screen buttons.
- Click and drag left or right on a rotary control.
- Click on a parameter value to enter a specific number from the console keyboard – for example, Decay time.

3. You can map the effects controls onto the console’s Smart Panel by pressing the **FX Edit** button.

The Smart Panel updates to show which parameters can be controlled from each controller:



4. Turn the rotary controls to adjust the parameters.

You can view the parameter values on the Main Mix Effects Editor window.

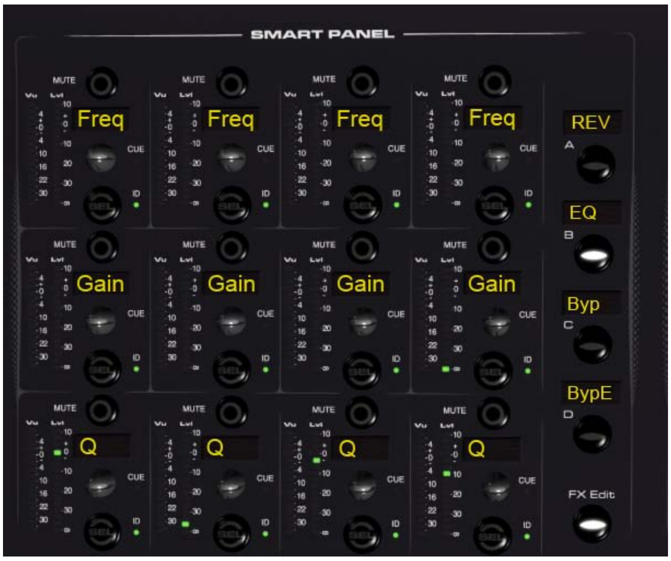
Note

Note that the Effects Editor window does not have to be open in order to use the **FX Edit** function. Each time **FX Edit** is selected, the last effects module viewed will be mapped onto the Smart Panel controls for the selected channel.

You can also lock the Smart Panel into **FX Edit** mode from the General Preferences, see Page 428.

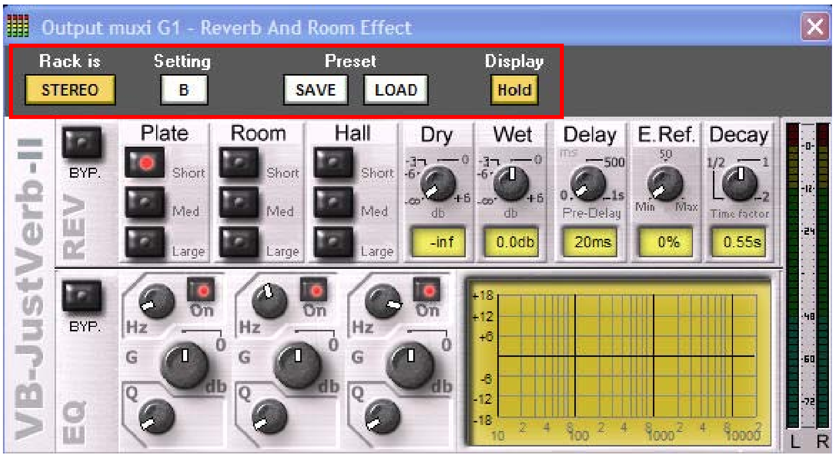
For some plug-ins, there may be more than one set of controls:

5. Press the Smart Panel **A**, **B**, **C** and **D** buttons to page through the different sets of effects controls:



The Effects Editor Window

At the top of the Effects Editor window are a number of other useful options:



Rack is STEREO

This field is for display purposes only and shows whether the effects bay is set for MONO or STEREO operation.

A/B Settings

1. Click on the Setting **A** button to switch to Setting **B**.

This button enables you to setup one effect (**A**), switch to the alternate setting (**B**) and setup a different sounding effect. You can then A/B between the two settings by clicking the A/B button.

Note

Note that it is only the current setting which is stored when you save a Page. Therefore, if you wish to store both your **A** and **B** parameters, save a preset.

Presets

The **SAVE** and **LOAD** buttons are used to save and load presets to and from the console's hard disk. Saved presets are available to load to any channel using the same plug-in effect.

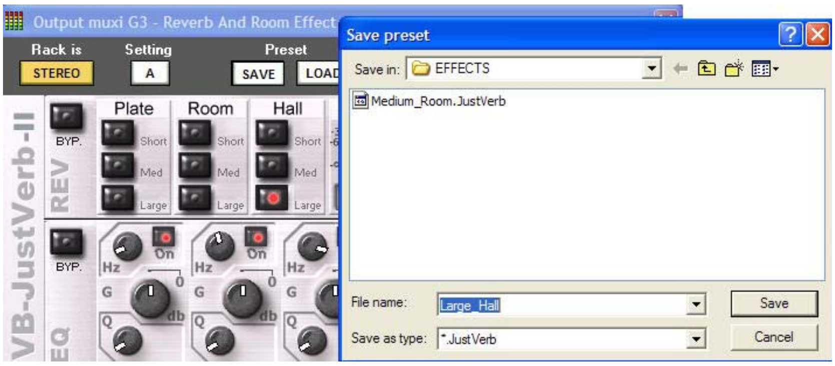
Note that presets are stored independently of Files. This means that you can load presets to another show, or export presets to another Innovason console. See Page 352.

Note

To save the current effects parameters to a preset:

1. Click on the **SAVE** button.

A file dialogue window opens asking for a File name:


Save preset
Save in: EFFECTS
Medium_Room.JustVerb
File name: Large_Hall
Save as type: *.JustVerb

2. Enter a name and select **Save**.

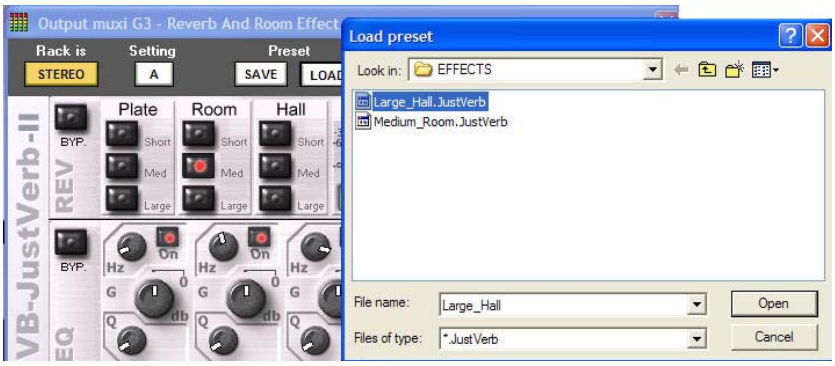
The preset is stored onto the console's hard disk in the EFFECTS folder.

To load a preset:

1. Open the Effects Editor on the channel where you wish to load the preset.

Note that the plug-in must match the saved preset; you cannot load De-esser settings to a Just Verb!

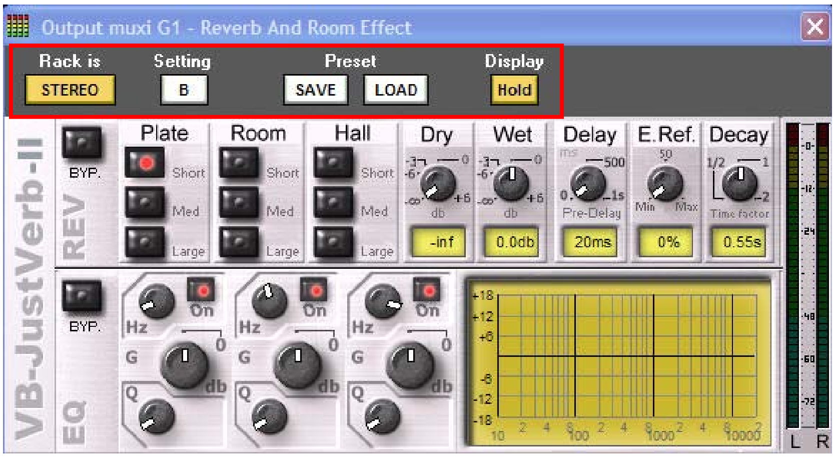
2. Click on the **LOAD** button.


Load preset
Look in: EFFECTS
Large_Hall.JustVerb
Medium_Room.JustVerb
File name: Large_Hall
Files of type: *.JustVerb

3. Select a preset and **Open**.

The preset is loaded to the effects module.

Display Hold



Output muxi G1 - Reverb And Room Effect

Rack is: STEREO
Setting: B
Display: Hold

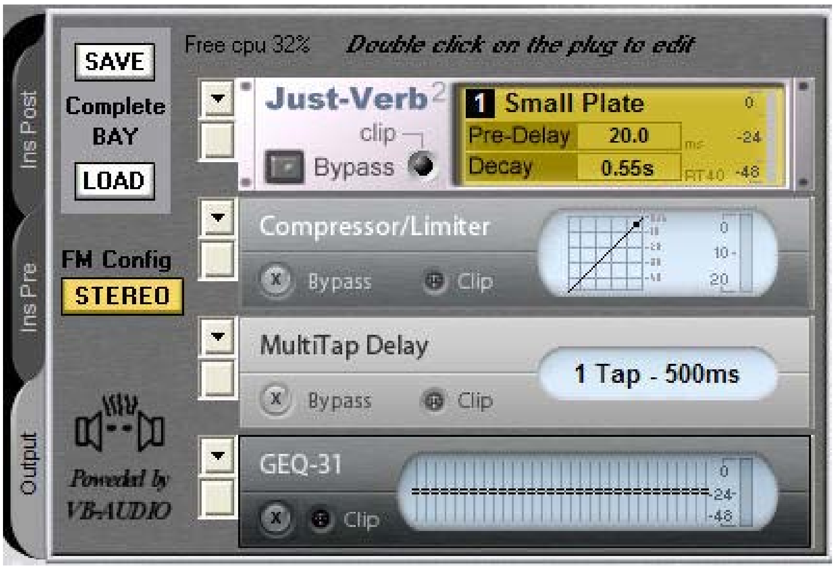
When Display **Hold** is enabled (yellow), the Effects Editor window automatically appears if the fader or Smart Panel controller is selected (**SEL** is pressed).

By enabling this option for different plug-in Editors on different channels you can quickly get access to say your vocal Reverb each time the vocal channel is selected, then to your guitar Chorus when your guitar channel is selected, etc.

When Display **Hold** is disabled (white), you must re-select the Effects Editor window (by double-clicking on the effects rack) each time you select the channel.

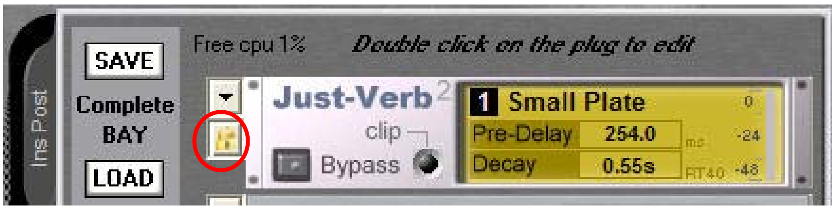
The Effects Rack display

To the left of the main effects racks are a number of other useful options available across all effects bays:



Locking a Rack

1. Each effects rack can be locked by clicking on the button below the down arrow:



When locked the effects module will NOT be reset by any Page changes. This allows you to use the effect like an outboard device so that it remains in manual control at all times.

2. Click on the padlock icon to remove the lock.

Note that each effects module within the bay can be locked or unlocked individually.

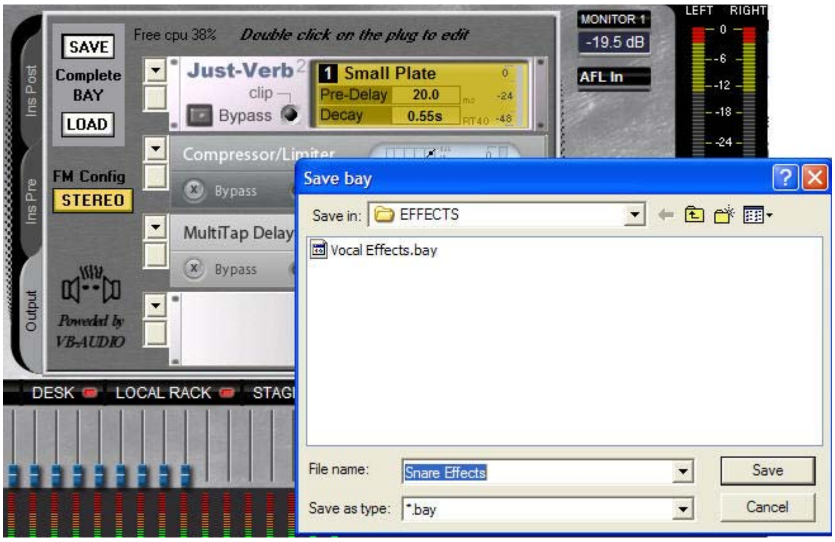
Bay Save and Load

The Complete BAY **SAVE** and **LOAD** buttons save and load both the plug-in assignments and parameters for all four effects racks within the bay. You might use these to save and recall the complete effects setup for a vocal channel.

To save the current bay's configuration and parameters:

1. Click on the **SAVE** button.

A file dialogue window opens asking for a File name:



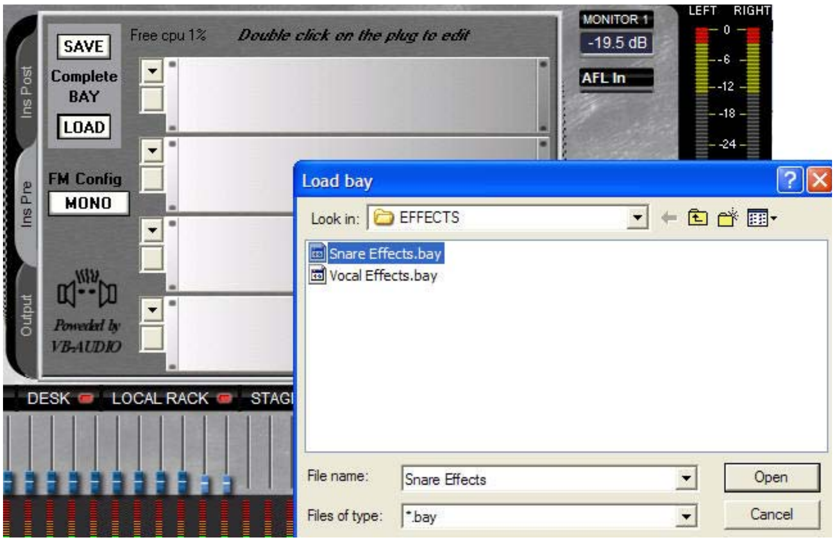
Small Plate
Pre-Delay 20.0
Decay 0.55s
-19.5 dB
Save in: EFFECTS
Vocal Effects.bay
File name: Snare Effects
Save as type: *.bay

2. Enter a name and select **Save**.

The bay is stored onto the console's hard disk in the EFFECTS folder.

To load back your bay configuration:

1. Open the effects processing on the channel where you wish to load the preset.
2. Click on the **LOAD** button.



-19.5 dB
Look in: EFFECTS
Snare Effects.bay
Vocal Effects.bay
File name: Snare Effects
Files of type: *.bay

3. Select a bay configuration and **Open**.

The plug-in assignments and effects parameters are loaded to your selected channel.

Note

Note that the complete bay configuration can only be loaded if there is enough DSP resource left on the FM8-VB card to support the stored settings.

For example, if you have already used your complement of four **JustVerb** plug-ins, then the bay **LOAD** may fail. An error pop-up appears if this occurs. To successfully load the bay configuration you will need to remove a JustVerb resource from another channel on the FM8-VB card.

Mono/Stereo Configuration

1. Click on the **MONO** or **STEREO** button to change the mono/stereo configuration of the effects bay.

This is the same as the **St.** button within the FM Configuration window of the **PATCH** displays.

Inserting an Internal Effects Bay

Rather than use an aux send and effect return, you can insert an effects bay directly into the input or output channel. This is great for inserting an effect on a particular channel or mix bus.

Please see Page 309 for details on inserting an internal effect.

Inserts

On input channels, inserts are always pre-fader, and the inserted device can be:

- An external device connected to any input/output pair.
- An internal effects bay provided by the FM8-VB card.

On output channels, inserts can be pre-fader or post-fader, and the inserted device can be:

- An external device connected to any input/output pair.
- An internal effects bay provided by the FM8-VB card.
- One of the 16 floating DSP resources.

Note that on output channels you can use both insert points. For example, to insert a floating DSP resource pre-fader and then an internal effects bay post-fader.

In either case, the first operation is to configure the external device or internal effects bay as an insert. Note that the floating DSP resources are always available as inserts for output channels without any pre-configuration.

Configuring an Insert Device

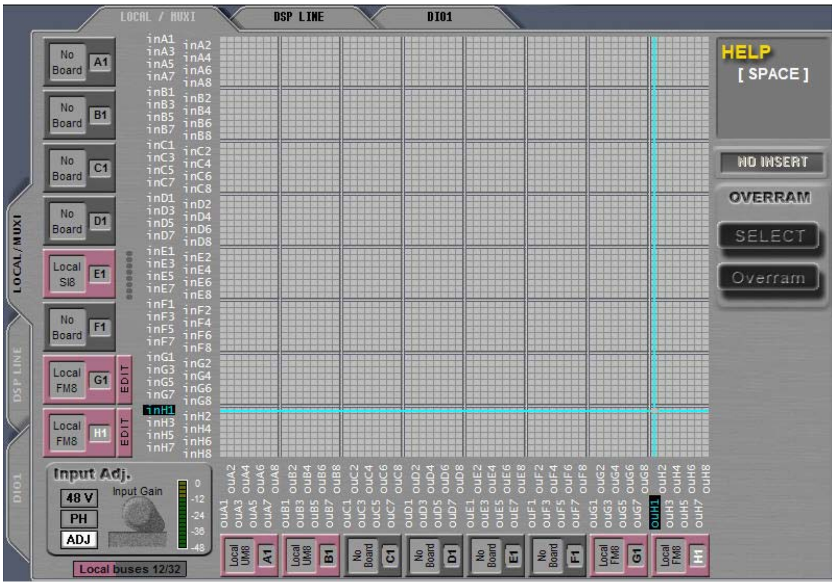
	D I/O **(UTILITIES)**
	“GRID -> Patch Direct I/O”
	[F10]

First we need to define the input and output pair to/from the external device or internal effects bay (FM8-VB card) as an insert send and return. This is done from the **PATCH DIRECT** grid.

1. Open the **PATCH DIRECT** grid.
2. Select the **LOCAL / MUXI** tab to view the eight Muxipaire interface card slots (at the rear of the console).

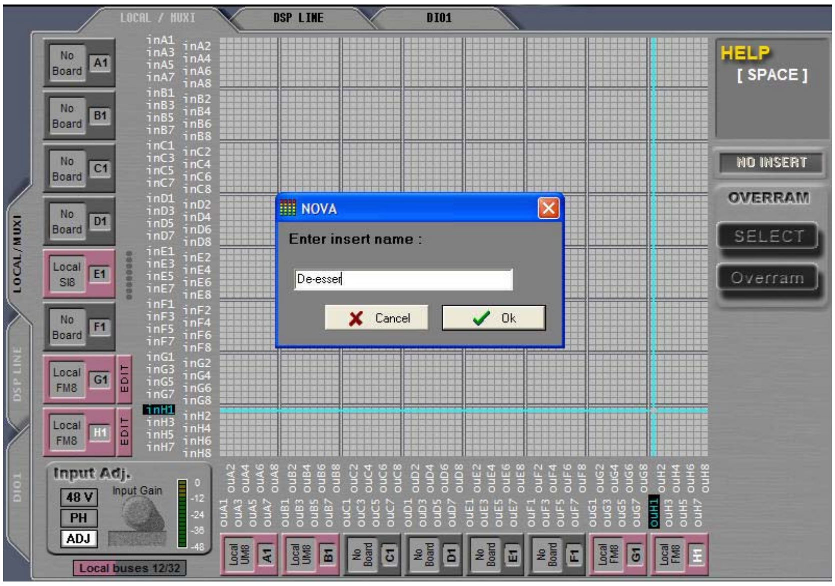
In our example, the last two slots are fitted with **Local FM8** (FM-8VB) cards.

3. Position the cursor at the input and output crosspoint which you wish to define as the insert send and return – for example, at the first input and output of the second **Local FM-8** card:



4. Then press [**i**] on the console keyboard to define the insert.

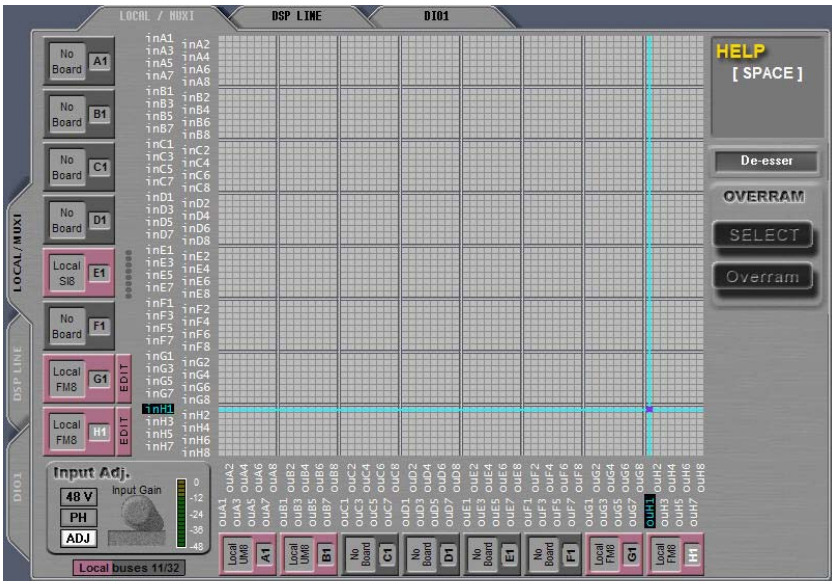
A window appears asking for a name:



Enter insert name : De-esser

5. Enter a name – for example, **De-esser** – and select **OK** or press [**Enter**].

The selected crosspoint turns blue to indicate that the insert has been defined:



You have now defined an insert point named **De-esser** where the insert send is output **ouH1** and the insert return is input **inH1**.

Assigning the Insert to an Input Channel

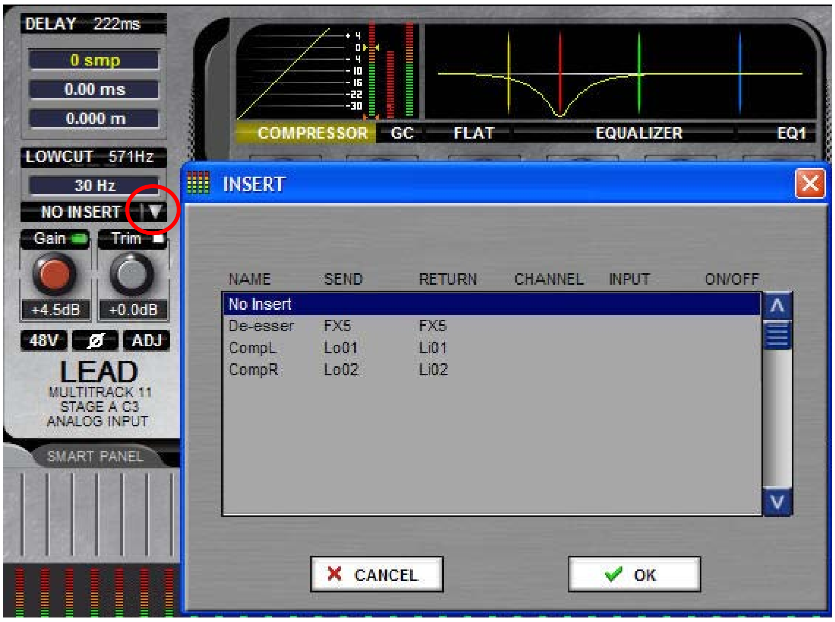
Having defined the insert it can be assigned to a channel. Note that on input channels, insert points are always pre-fader.

1. Return to the main Mix display and select the **LEAD** vocal input channel (press **SEL** on the fader).

Note

Note that the insert on/off button displays the name of any assigned insert. In our example, there is nothing assigned and so the button reads **NO INSERT**.

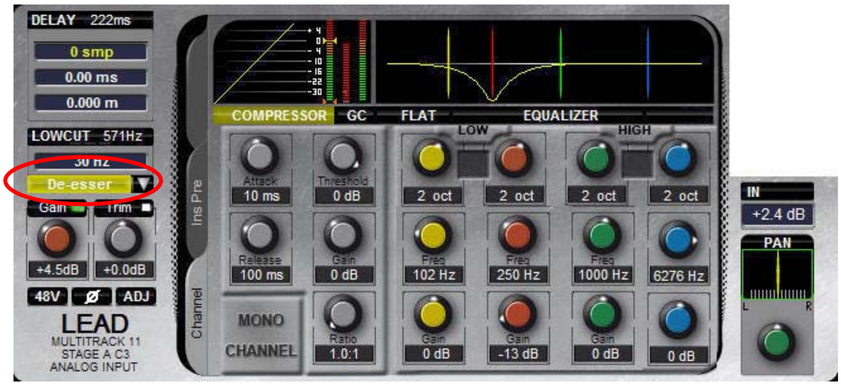
2. Click on the down arrow beside the insert on/off button to open the INSERT selection list:



NAME	SEND	RETURN	CHANNEL	INPUT	ON/OFF
No Insert					
De-esser	FX5	FX5			
CompL	Lo01	Li01			
CompR	Lo02	Li02			

3. Select the insert you wish to assign – for example, **De-esser** - and **OK** or press [**Enter**].

*The insert point named **De-esser** is now assigned to the **LEAD** vocal channel and is automatically switched on:*



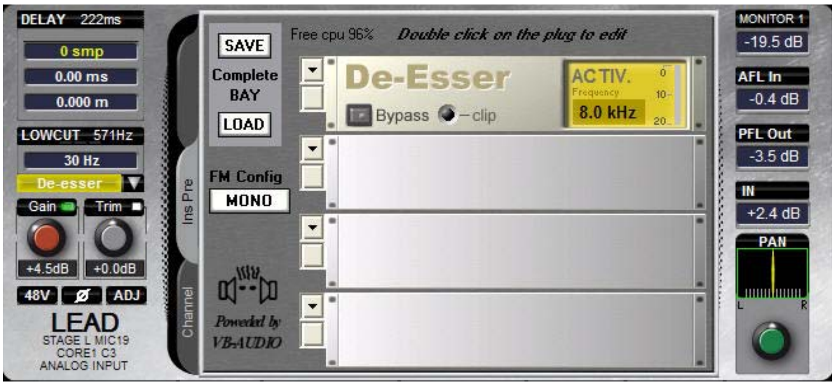
Note

Note that if the channel is stereo you are automatically asked to assign insert points to left and right.

Controlling the Inserted Processing

If you have inserted an internal effects bay then you can control that processing from the console:

1. Select the channel and click on the **InsPre** tab:



You can now configure and control the effects bay from the Smart Panel or Main Mix display as described on Page 300.

2. Remember that you can turn the insert off at any time by pressing the **Insert** button or clicking on the Insert name on the Main Mix display:

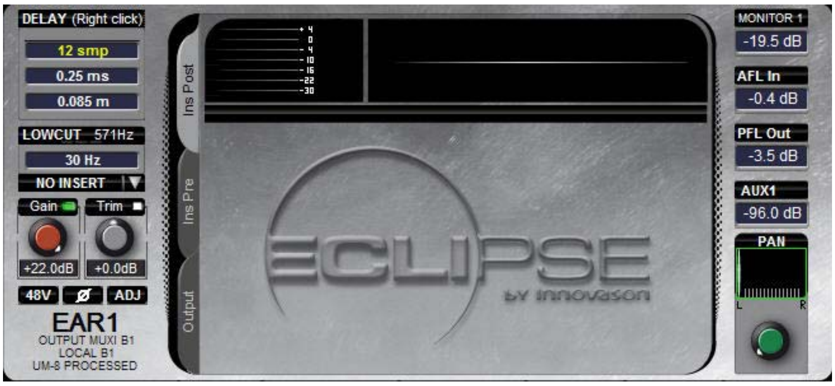
- Yellow = insert on
- Black = insert off

Assigning an Insert to an Output Channel

Assigning the insert to an output channel is very similar. However, on output channels (mix busses) you can decide whether the insert point is pre or post fader, and you also have the option to insert internal signal processing (from 16 “floating” DSP paths).

1. Select the output channel (press **SEL** on the fader or Smart Panel controller).
2. BEFORE you right-click to choose an insert, select whether the insert will be pre or post-fader:

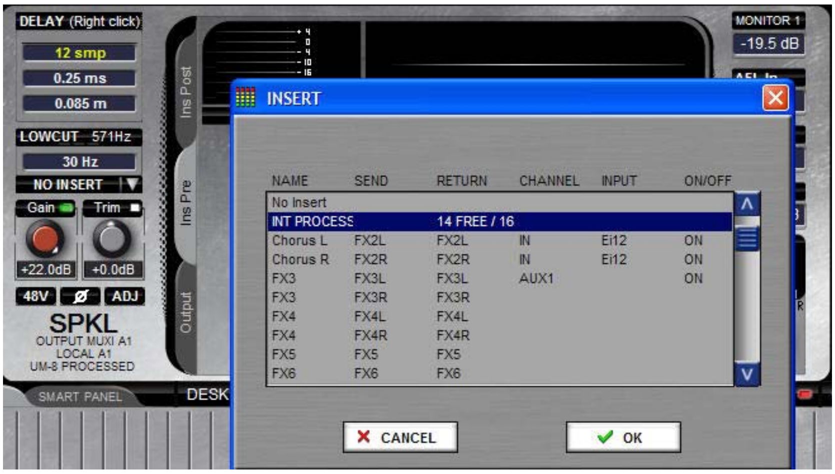
- Click the **Ins Pre** tab to assign a pre-fader insert.
- Click the **Ins Post** tab to assign a post-fader insert:



3. Now follow the steps on Page 312 to assign the insert.

Note

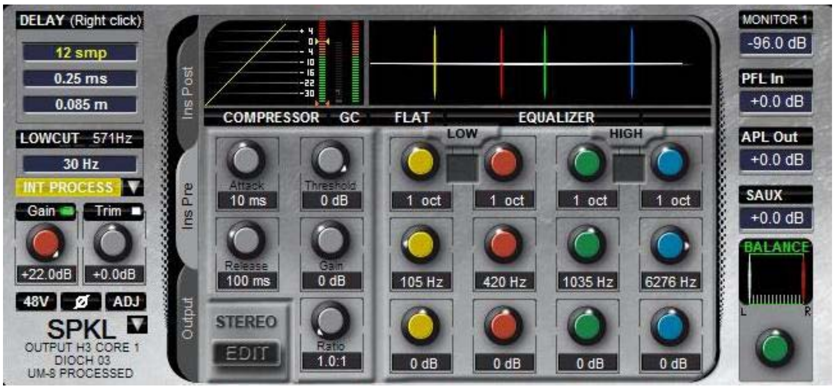
On output channels, the INSERT selection list includes the 16 internal DSP paths (**INT PROCESS**). These can be used to apply EQ, Dynamics, etc. to a mix bus:



NAME	SEND	RETURN	CHANNEL	INPUT	ON/OFF
No Insert					
INT PROCESS		14 FREE / 16			
Chorus L	FX2L	FX2L	IN	Ei12	ON
Chorus R	FX2R	FX2R	IN	Ei12	ON
FX3	FX3L	FX3L	AUX1		ON
FX3	FX3R	FX3R			
FX4	FX4L	FX4L			
FX4	FX4R	FX4R			
FX5	FX5	FX5			
FX6	FX6	FX6			

4. You can control the internal processing by selecting the **Ins Pre** or **Ins Post** tab.

The following example shows **Ins Pre** processing on a stereo Aux fader; the inserted device is from the 16 internal DSP resources:

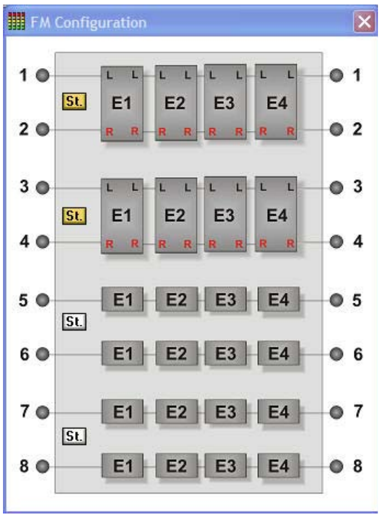


5. You can now use the front panel DYNAMIC or PARAM EQ controls to adjust the inserted processing.

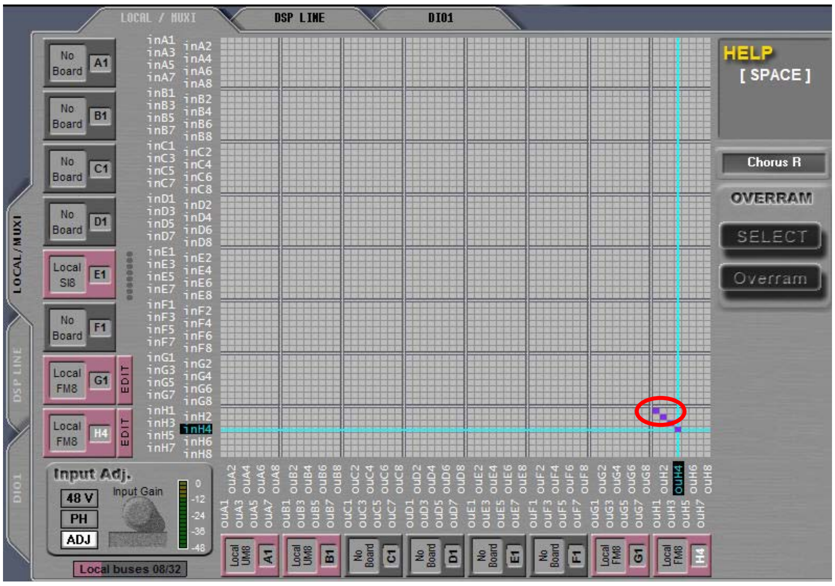
Inserting Mono and Stereo Effects Bays

When inserting effects bays, please note the following:

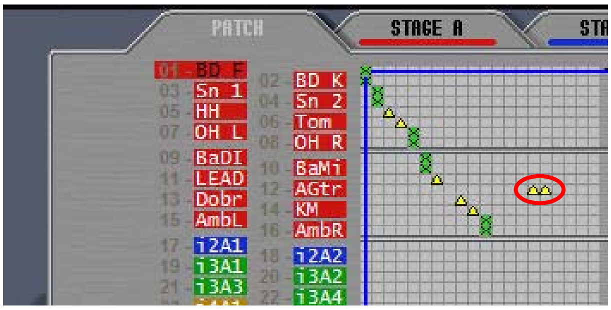
- If you insert an effects bay on a stereo channel, then you are automatically asked if you wish to link the bay for stereo operation.
- To use a stereo effect on a mono source - for example to apply stereo chorus to a guitar - split the source to two input channels, pan the channels left and right to the mix, and assign the left insert to the left channel and right insert to the right channel. This example is illustrated below:



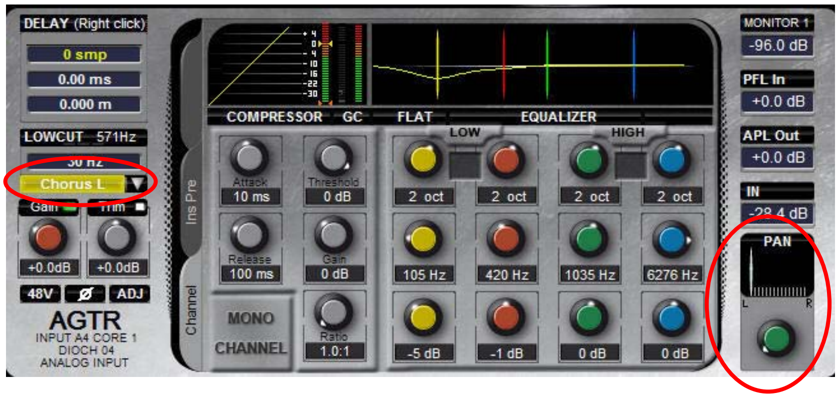
1. Configure the stereo effects bay to be used for the Chorus.
2. From the **PATCH DIRECT** grid define two inserts, one for Chorus Left and one for Chorus Right:



3. From the **PATCH IN** grid, patch the guitar microphone to the two input faders to create the split:

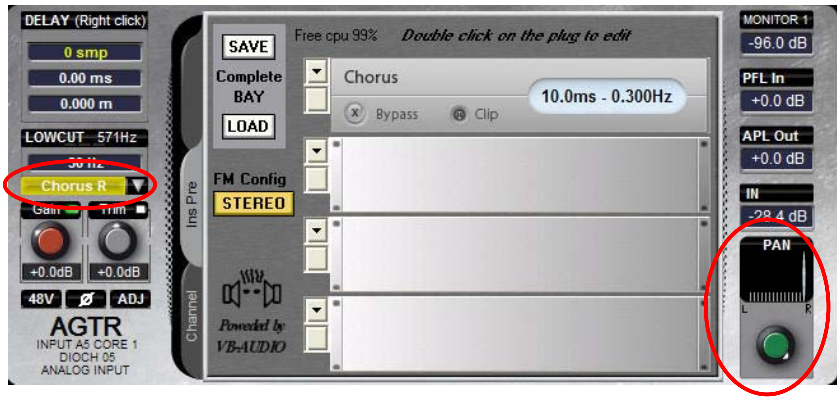


4. Return to the Main Mix display and select the first Guitar input fader. Pan the channel full left and assign the **Chorus Left** insert point:



5. Then assign the Chorus effect plug-in to one of the effects racks.

6. Select the second Guitar input fader, pan the channel full right and assign the **Chorus Right** insert point:



7. Remember to check that the insert on/off button is on (yellow) on both guitar channels.

8. You can now control the Chorus by selecting the **Ins Pre** tab on either input channel.

You can link the two channels so that other signal processing (EQ, level, etc.) is applied equally to the stereo return.

Tip

Fast Configuration

This window allows you to set default parameters, such as EQ On, Dynamics On, Level to 0dB, bus routing, etc. for input, Aux, Group, Matrix, Master and VCA channels. You can choose to apply your settings to the current mix, or use the settings for new channels assigned to the surface from the Personal Console Builder.

ECLIPSE	**n/a**
🖱	**“UTIL -> Fast Configuration ”**
⌨	**n/a**

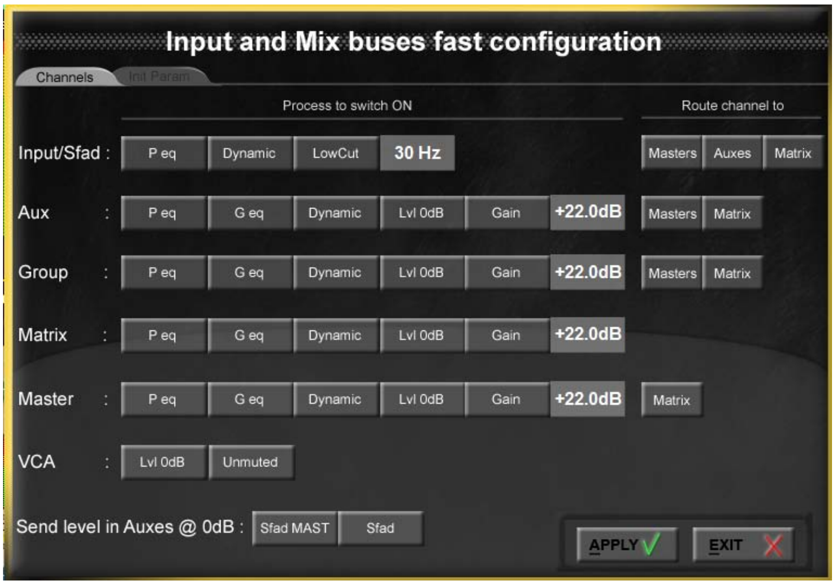
1. Open the window by selecting **UTIL** -> **Fast Configuration**.

At the top of the display choose between:

- **Channels** – select this tab to configure functions such as EQ On, Level to 0dB and routing.
- **Init Param** – select this tab to apply initial Compressor, Gate and Pan curve values.

Configuring Channels

1. Select the **Channels** tab:



2. Use the on-screen buttons to select what you wish the configure for each channel type - for example, select **Peq** in the **Input/Sfad** row to turn on Parametric EQ for all input channels.

When an option is selected, the button turns red.

Note

Note that:

- The **Gain** option sets output gain; enter a value in dB by clicking the left or right mouse buttons in the dB box.
- The “**Route channel to**” options assign all channels of the selected type to Masters, Auxes, Matrix.
- The “**Send level in Auxes @ 0dB**” options set Aux sends from Smart Fader masters or slaves to 0dB.

3. Once you have made your selections, you have two options:

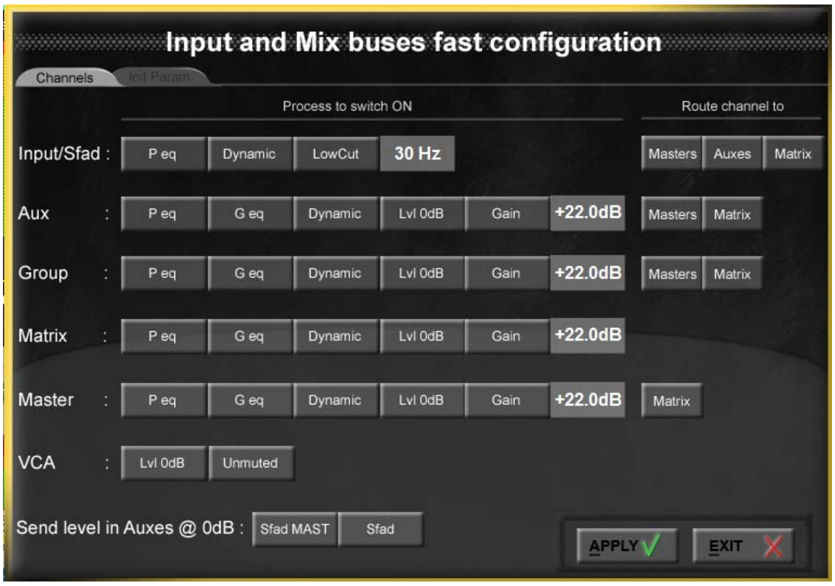
- Select **APPLY** to apply the settings to the current mix.

The current mix is updated and an INFO pop-up appears briefly confirming the operation.

- Select **EXIT** if you do not wish to update the current mix, but apply the settings to new channels.

The ***Fast Configuration*** *window closes without updating the current mix but retains your selections. Whenever you create a new input, Aux, Group Matrix or Master, then these default settings will be applied.*

4. To clear the Fast Configuration parameters, open the window, deselect the on-screen buttons and then select **EXIT**:

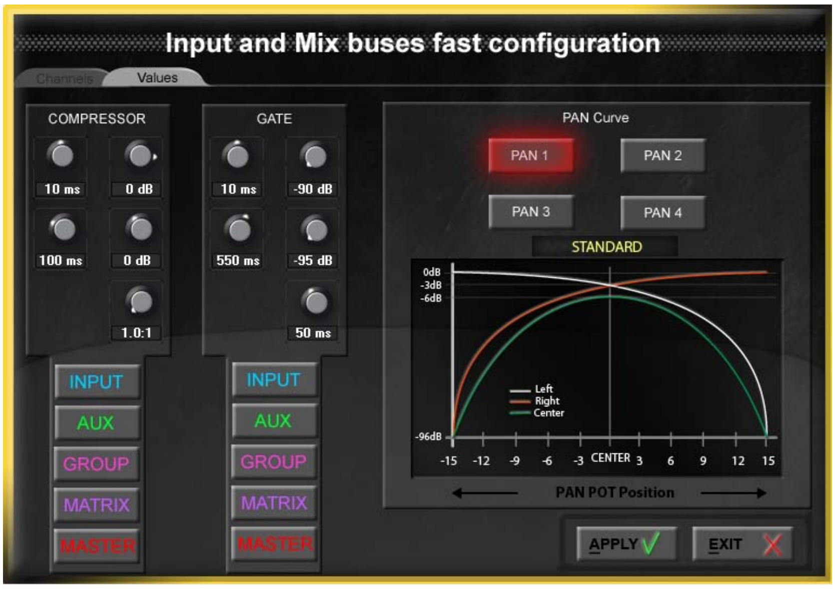

Input and Mix buses fast configuration
Channels
Init Param
Process to switch ON
Route channel to
Input/Sfad : P eq Dynamic LowCut 30 Hz Masters Auxes Matrix
Aux : P eq G eq Dynamic Lvl 0dB Gain +22.0dB Masters Matrix
Group : P eq G eq Dynamic Lvl 0dB Gain +22.0dB Masters Matrix
Matrix : P eq G eq Dynamic Lvl 0dB Gain +22.0dB
Master : P eq G eq Dynamic Lvl 0dB Gain +22.0dB Matrix
VCA : Lvl 0dB Unmuted
Send level in Auxes @ 0dB : Sfad MAST Sfad
APPLY
EXIT

From here on, no default parameters will be applied to new channels.

Configuring Initial Parameters

The **Init Param** tab allows you to configure specific parameter values for the Compressor and Gate, and select a Pan curve.

1. Select the **Init Param** tab:

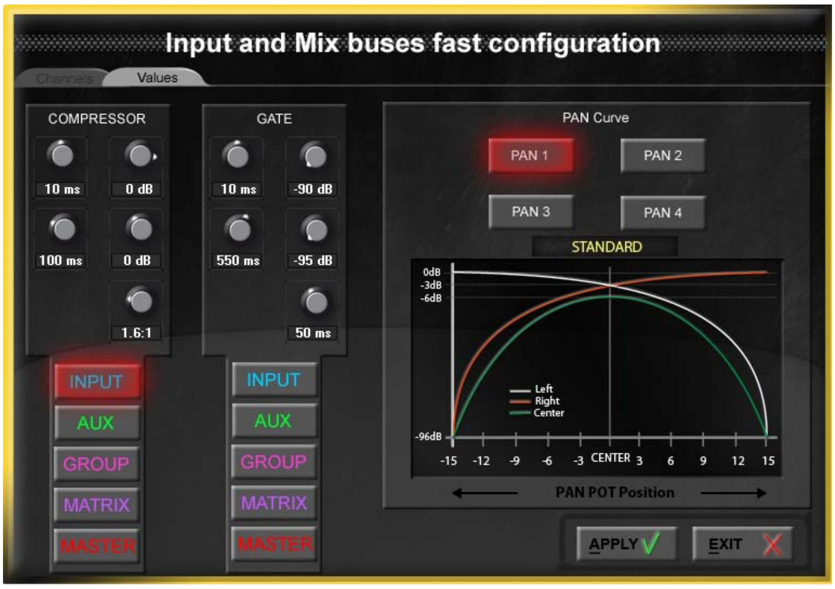


2. Adjust the values by left or right-clicking on the relevant parameter control.

You can adjust settings for the Compressor, Gate and select a Pan Curve using the **Pan 1** to **Pan 4** buttons.

3. Then select the channel types you wish to initialise from the **INPUT**, **AUX**, **GROUP**, **MATRIX** or **MASTER** buttons.

In our example, we have set some default parameter values for the Compressor, which will be applied to all input channels:



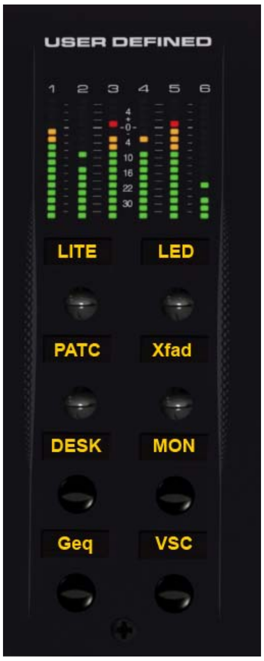
4. Having made your selections, you have two options:

- Select **APPLY** to apply the settings to the current mix.

The current mix is updated and an INFO pop-up appears briefly confirming the operation.

- Select **EXIT** if you do not wish to update the current mix, but apply the settings to new channels.

*The **Fast Configuration** window closes without updating the current mix but retains your selections. Whenever you create a new input, Aux, Group Matrix or Master, then these default values will be applied.*



ECLIPSE	**n/a**
🖱	**“UTIL -> User Defined Assignment”**
⌨	**n/a**

User Defined Panel

The USER DEFINED panel provides six VU meters, four rotary controls and four switches.

The VU meters may be assigned to any source or mix bus (Aux, Group, Matrix, Master or Monitor).

Rotary controls and switches may be assigned from a wide range of functions. These include short cuts to favourite menus; selecting and sending MIDI program changes; grouped switch changes; access to functions such as tap tempo.

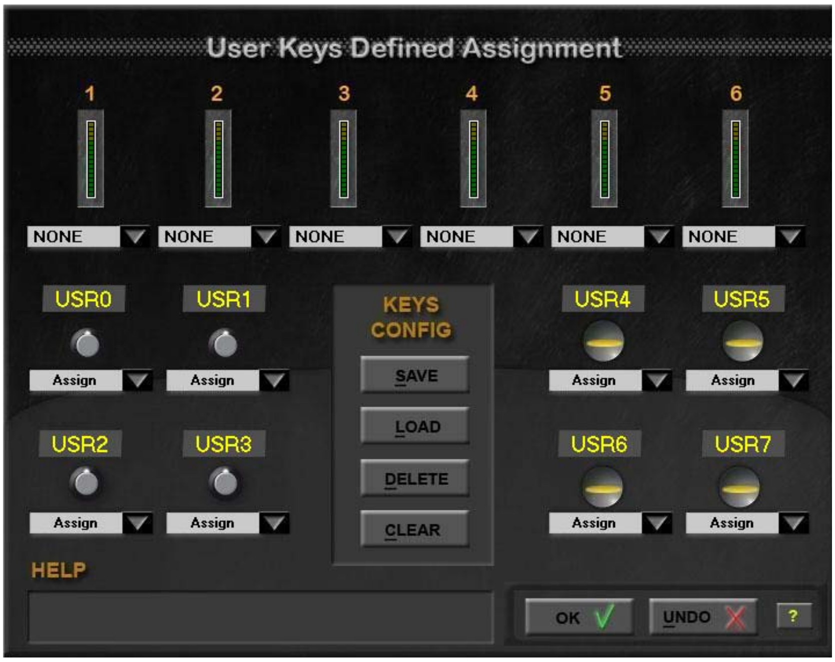
User Key Configurations can be saved and loaded independently of the current File and Page. This allows you to create different configurations for patching, FOH mixing, mixing monitors, and so on.

Making Assignments

To edit the User Defined panel assignments:

1. Using the trackball, select “**UTIL** -> **User Defined Assignment**”.

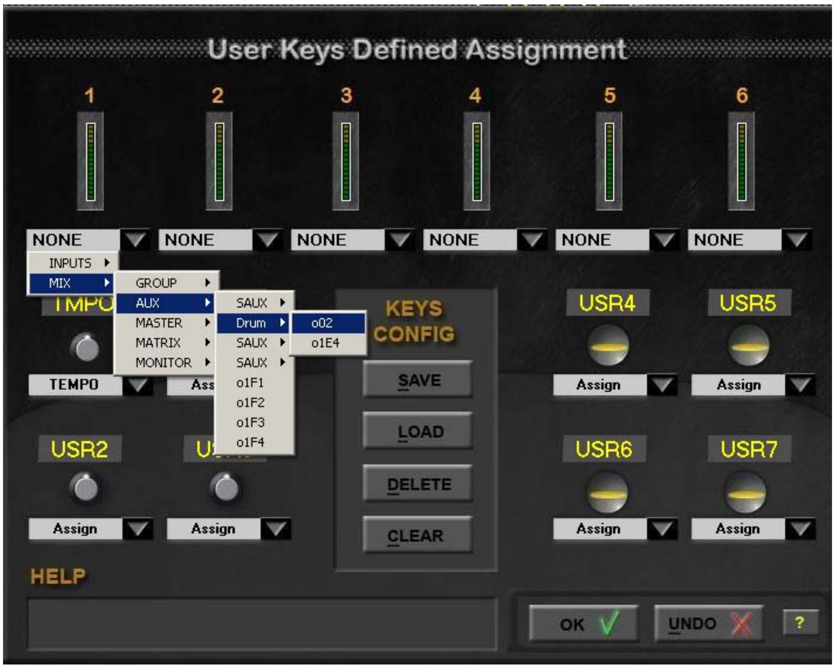
The current assignments are shown on the configuration window:



Assigning a VU Meter

Any of the six VU meters may be assigned to an input source or mix bus (Aux, Group, Matrix, Master or Monitor):

1. Click on the arrow below the meter to reveal the options:



Inputs are divided into three source categories:

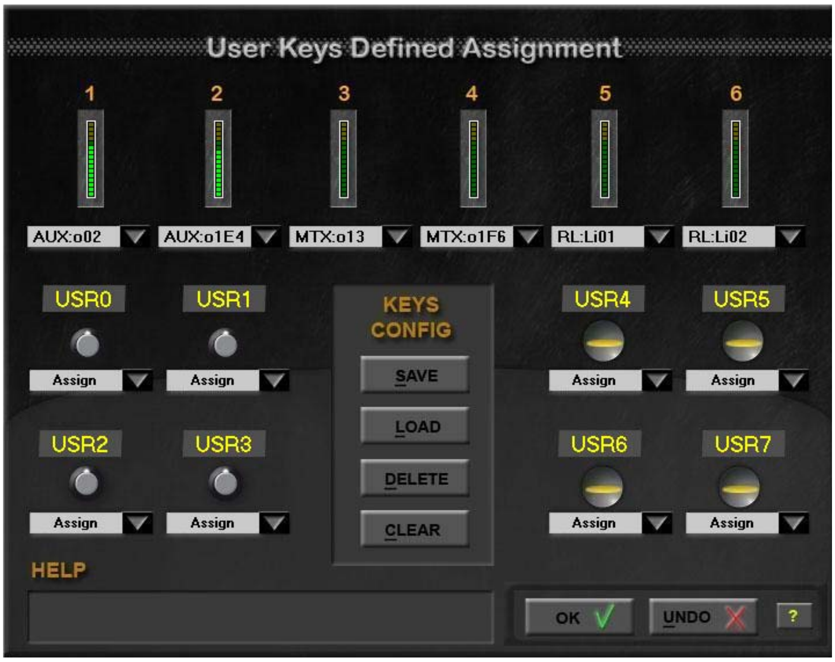
- **MUXI** – the Muxipaire inputs (at the rear of the console or remote Stagebox).
- **LINE** – the 16 line level inputs on the DSP card at the rear of the console.
- **ES** – Ethersound channels 1 to 64.

Mix busses provide access to the Group, Aux, Master and Matrix busses configured within the Personal Console Builder plus the Monitor bus.

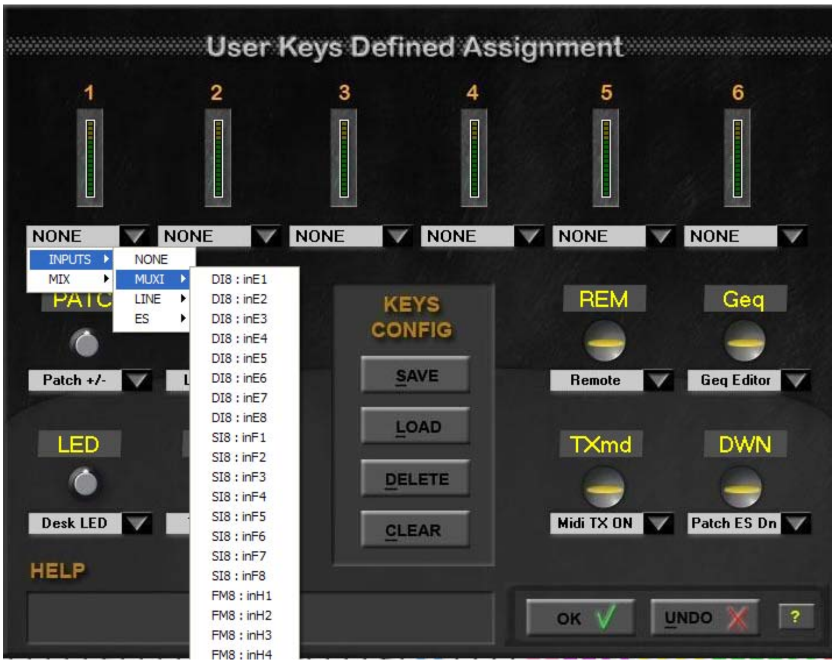
If a mix bus is stereo, then you can select the left, right or centre channel.

2. Select a signal and click to make the assignment.
3. Repeat to assign each VU meter.

You will see the Label for your selections and audio if signal is present:



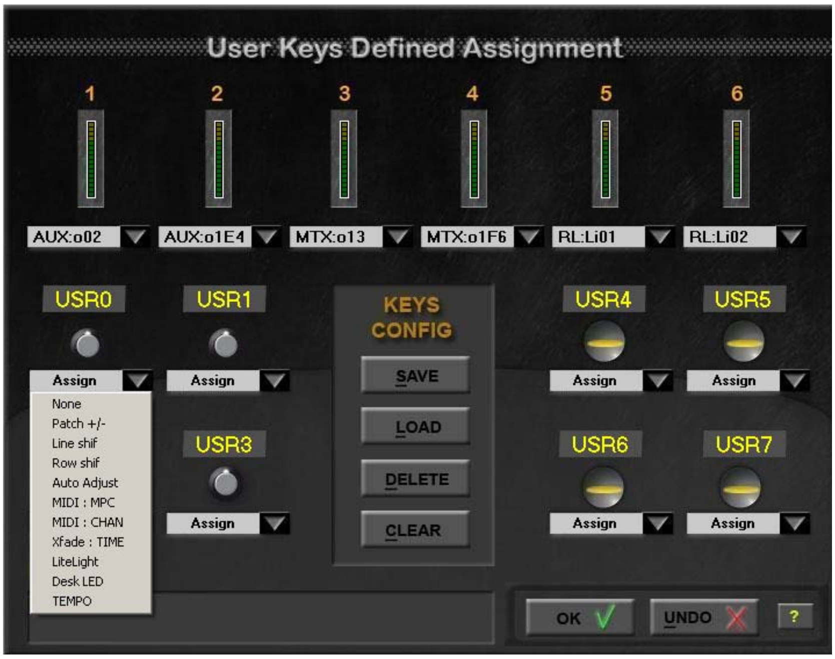
4. To remove an assignment, select **None** from the Inputs sub menu:



Assigning a Rotary Control or Switch function

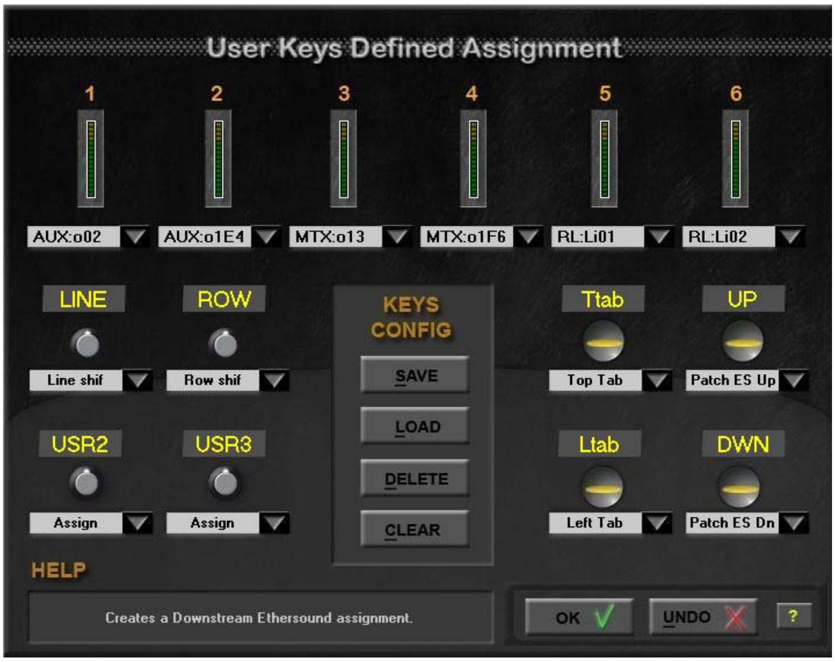
The four rotary controls and four switches are assigned in a similar manner:

1. Click on the arrow below the control or switch to reveal the options:



2. Select a function and click to make the assignment.

The name of the function appears above the control:

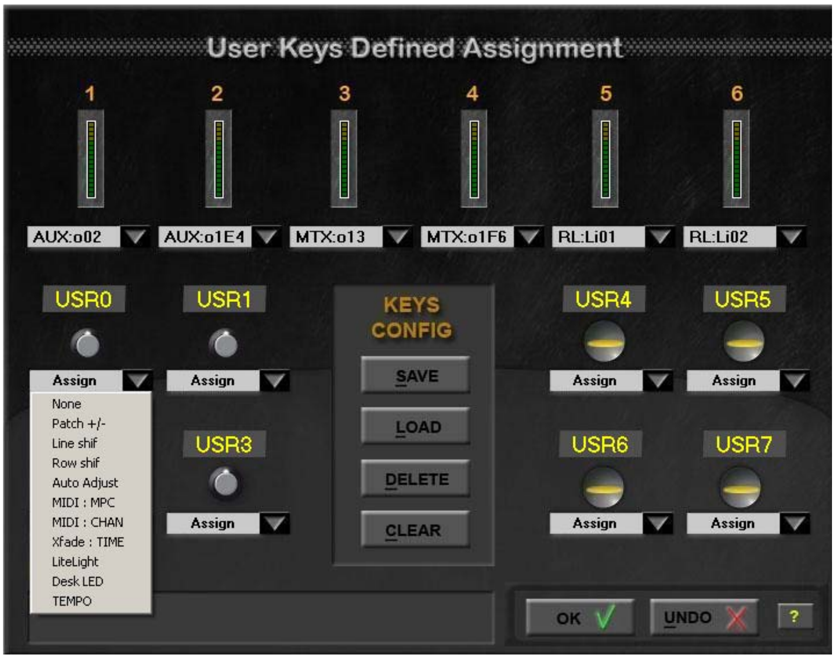


Creates a Downstream Ethersound assignment.

3. Press **OK** to exit the configuration window.

Rotary Control Functions

Each rotary control on the User Defined panel can be assigned to any of the following functions:



Note that some functions work in pairs and therefore require two available controls.

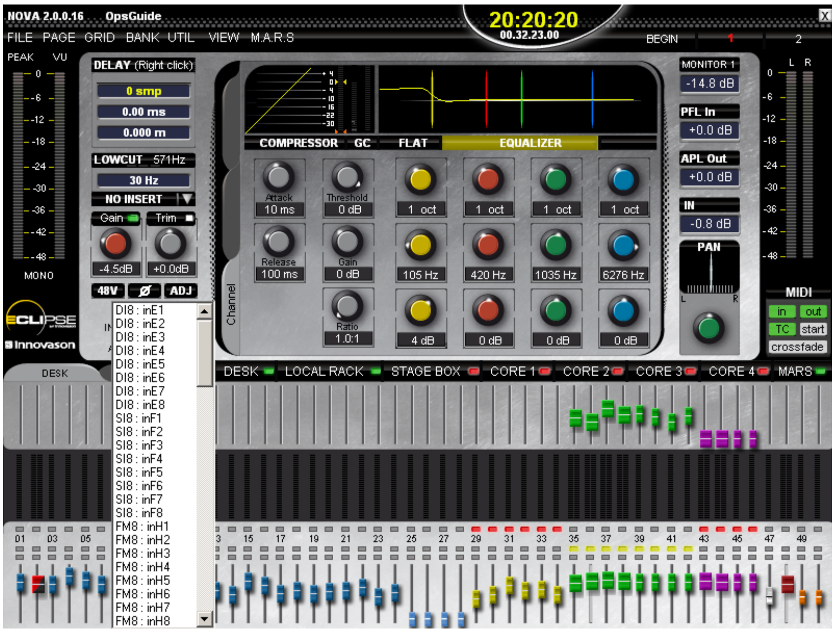
The following pages describe the operation of each function.

⏩ Patch +/-

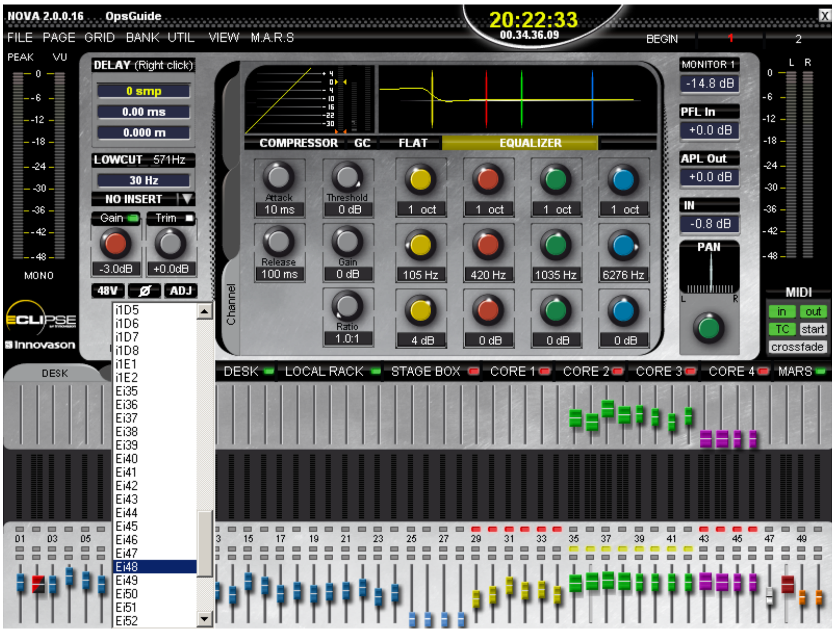
Can be used to patch sources from the Main Mix display:

1. Press **SEL** on any input Fader strip or Smart Panel controller.
2. Press down on the **Patch +/-** rotary control.

A list of available sources appears on the Main Mix display:



3. Turn the **Patch +/-** control to select an input:

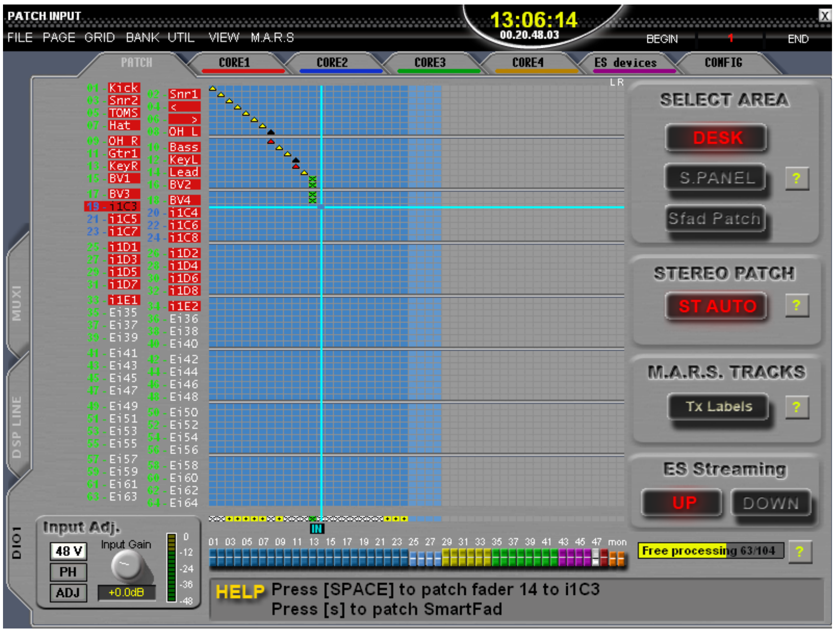


4. Press down to assign the source.

Or **CANCEL** to quit without changing the current patching.

⏩ Line Shift/Row Shift

These two functions work together within any grid display – for example, **PATCH INPUT**, **LINK IO**, etc.



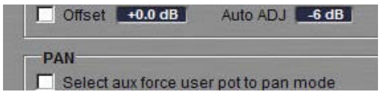
Press [SPACE] to patch fader 14 to i1C3
Press [s] to patch SmartFad

1. Turn the **Row Shift** control to move across the x-axis.
2. Turn the **Line Shift** control to move up and down the y-axis.
3. Press down on either control to action the crosspoint.

⏩ Auto Adjust

Sets the global Auto Adjust gain, and turns Auto Adjust on or off for the selected channel.

1. Turn the rotary control to set the **Auto ADJ** gain.


☐ Offset +0.0 dB Auto ADJ -6 dB
PAN
☐ Select aux force user pot to pan mode

This is the global level adjustment which be applied to *all* input channels with **ADJ** enabled, see Page 136. This is the same as using the **Auto ADJ** option on the **General Preferences** window, see Page 428.

2. Press **SEL** on any input Fader strip or Smart Panel controller (mono or stereo).
3. And press down on the rotary control to enable or disable Auto Adjust for the selected channel.

⏩ MIDI: MPC and CHAN

These two functions work together and allow you to select and send a MIDI program change to a MIDI channel. The MIDI data is transmitted to the MIDI Out at the rear of the Eclipse frame.

Note that MIDI **out** must be enabled on the Main Mix display before MIDI signals are transmitted, see Page 381.

1. Turn the **MPC** (MIDI Program Change) control to select a program number.

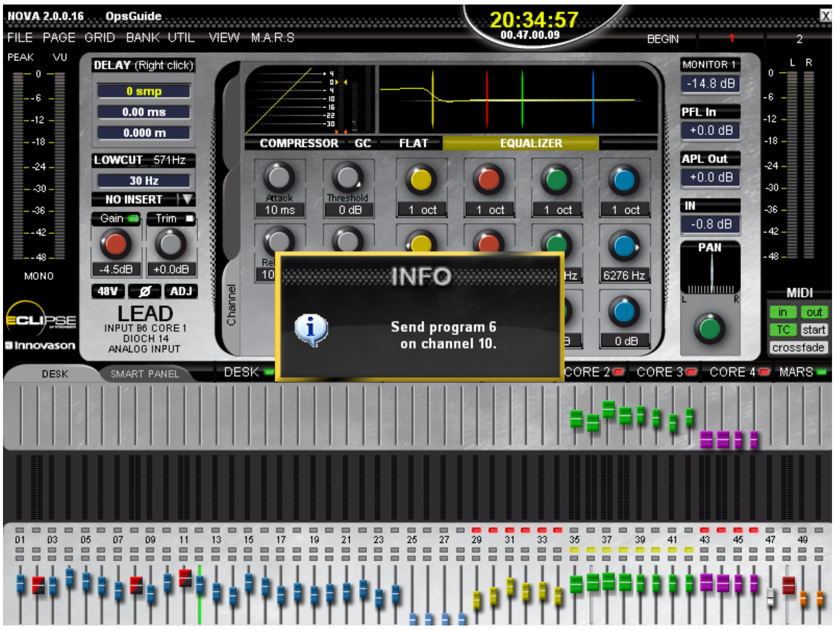
The selected number appears in the Label display above the control.

2. Turn the **CHAN** (MIDI Channel Select) control to select the MIDI channel.

The selected number appears in the Label display above the control.

3. Press down on the **MPC** control to send the data.

An INFO window appears momentarily confirming the operation:



INFO

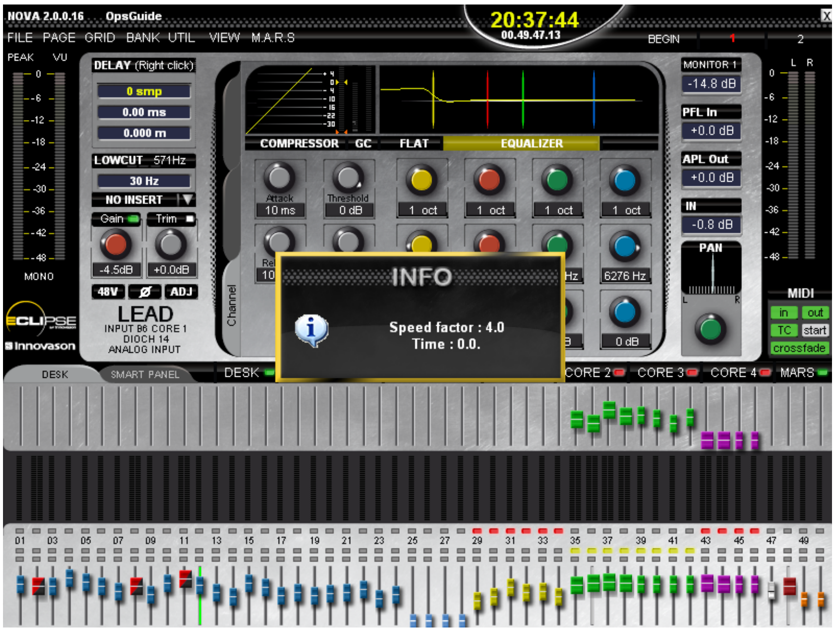
Send program 6
on channel 10.

Xfade: TIME

This rotary control can be used to adjust the crossfade time. The operation is similar to using a crossfade fader, see Page 378.

1. Turn the rotary control to adjust the crossfade speed factor.

An INFO pop-up appears confirming the current parameters:



Speed factor : 4.0
Time : 0.0.

2. Press down on the control to turn crossfading on or off.

An INFO pop-up appears confirming the status.

LiteLight

Adjusts the brightness of the Littlelites.

1. Turn the rotary control to adjust the brightness.

Desk LED

Adjusts the brightness of the VU meters, switch LEDs or ID indicators on the Fader strips and Smart Panel controllers.

1. Press down on the rotary control to change between the three modes.

The Label above the control updates to show:

- VUM = VU meters
- LED = switch LEDs
- ID = ID colours

2. Turn the rotary control to adjust the brightness.

Tempo

Adjusts and sends a tempo to any internal Multitap delay FX processor set to **autofit** mode, see Page 516.

Note

Note that you can also tap in a tempo using the Tap Tempo switch function described on the next page.

1. Turn the rotary control to preselect the tempo.

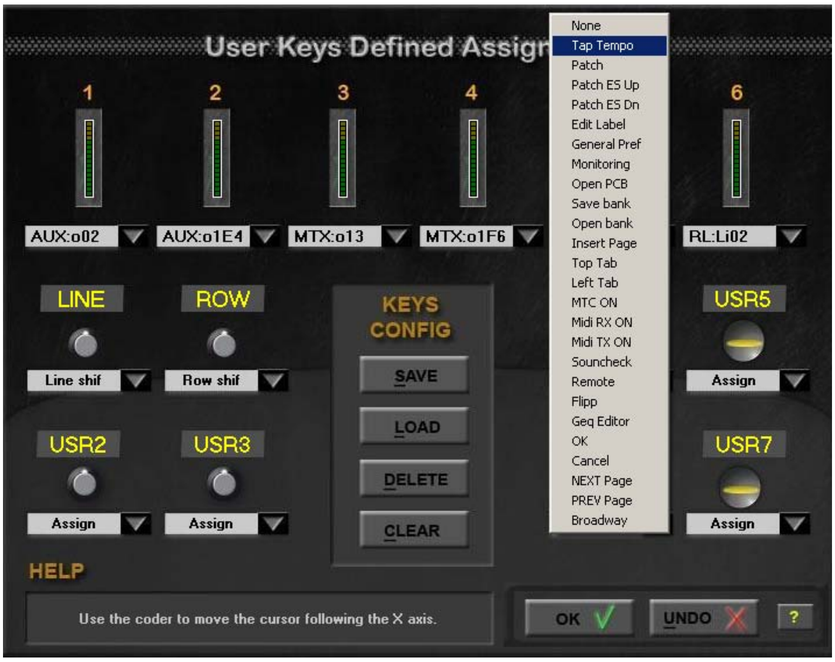
An INFO pop-up appears confirming the current value.

2. Then press down on the control to send this value.

The tempo is transmitted to all Multitap delays set to ***autofit*** *mode.*

Switch Functions

Each switch on the User Defined panel can be assigned to any of the following functions:



Use the coder to move the cursor following the X axis.

Note that some functions work together and therefore require several available switches.

The following pages describe the operation of each function.

Tap Tempo

Calculates and sends a tempo to any internal Multitap delay FX processor set to **autofit** mode, see Page 516.

Note

Note that you can also prepare and send a tempo using the Tempo rotary control function described earlier.

1. Tap the switch to enter a tempo.

*The system calculates the speed and displays this on an INFO pop-up window. The resultant tempo is transmitted to all Multitap delays set to **autofit** mode.*

Patch

1. Press this switch to select or deselect a crosspoint within any grid display – for example, **PATCH INPUT**.

This is the same as pressing the [**SPACE bar**] on the console keyboard.

Patch ES Up and Patch ES Dwn

Short cut keys for the **PATCH INPUT**, **PATCH OUTPUT** or **PATCH DIRECT** displays:

1. Press **Patch ES Up** to make an upstream Ethersound patch.
2. Press **Patch ES Dwn** to make a downstream Ethersound patch.

This is the same as pressing [**U**] or [**D**] on the console keyboard. Note that these functions are only relevant for Ethersound patching.

Edit Label

1. Press this switch to open the Label edit window for the selected input, output or channel.

This is the same as pressing the [**F3**] on the console keyboard.

General Pref, Monitoring and Open PCB

Short cut keys for opening the **General Preferences**, **Monitoring** or **Personal Console Builder** (PCB) windows.

Save Bank and Open Bank

Short cut keys for saving and loading channel processing, see Page 382.

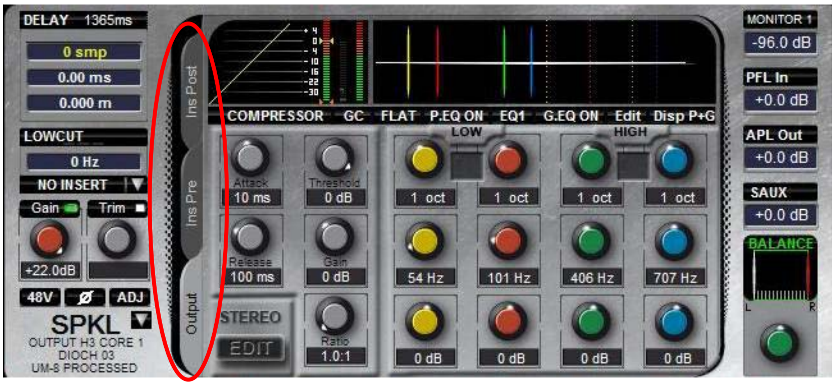
Insert Page

Short cut key for inserting a new Page based on the current Page. This is the same as selecting "**Page** -> **Insert Next as**" or pressing [**F2**] on the console keyboard. See page 356 for details.

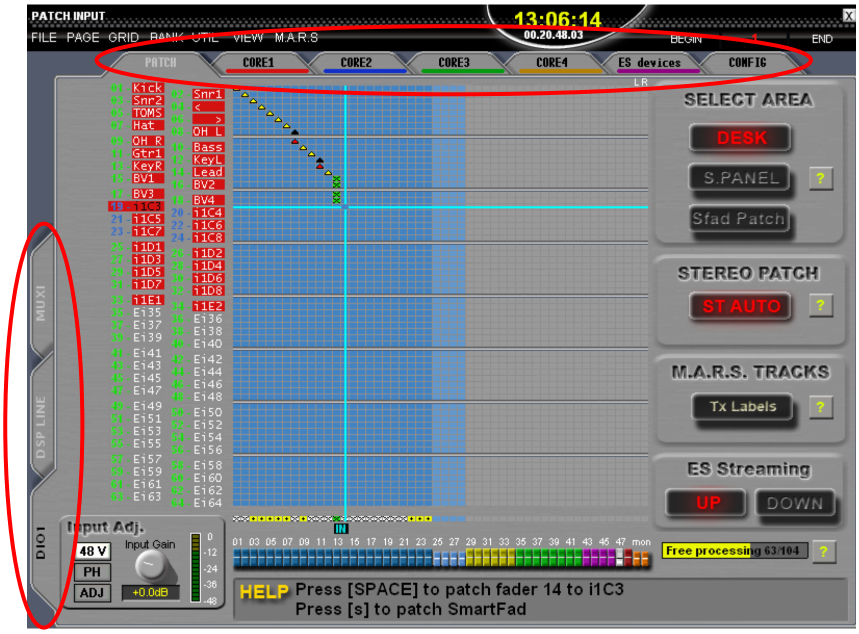
Top Tab and Left Tab

These two functions work within any display which has side or top tabs.

For example, on the Main Mix display you can use the **Left Tab** switch to cycle between the **Channel** and **Insert** tabs on an input channel or through the **Output**, **InsPre** and **Ins Post** tabs on an output channel:



On the **PATCH INPUT** display, the **Left Tab** switch will select a source category, and the **Top Tab** switch will cycle through the **PATCH**, **CORE**, **ES devices** and **CONFIG** options:



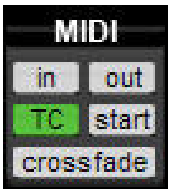
HELP Press [SPACE] to patch fader 14 to i1C3
Press [s] to patch SmartFad

⏩ MTC On, MIDI RX On and MIDI TX On

These three functions provide short cut keys for the MIDI automaton enable buttons:

1. Press the **MTC On** switch to turn MIDI timecode on or off.
2. Press **MIDI RX On** to turn MIDI receive on or off.
3. Press **MIDI TX On** to turn MIDI transmit on or off.

The MIDI in and out indicators on the Main Mix display update accordingly:



You can find more details on Page 381.

⏩ Soundcheck and Broadway

Short cut keys for enabling Virtual Soundcheck (VSC) or Broadway mode to replay audio from M.A.R.S.

This is the same as selecting "**M.A.R.S.** -> **Virtual sound check**" or "**M.A.R.S.** -> **Broadway**" from the main menus, see Page 444.

⏩ Remote

This switch can be used action several on/off functions from a single button press. For example, to switch all your outboard inserts out of circuit. Or, to switch a group of channel mutes on or off.

Up to four different Remotes can be configured using the four switches on the User Defined panel.

To programme the Remote switch's function:

1. Press and hold the **REM** switch.

*All selected channel displays (EQ, Dynamics, etc.) and **SEL** buttons go out across the console.*

2. While holding down the **REM** switch, press the on/off buttons which you wish to action – for example, press insert on/off.
3. Then press the **SEL** buttons on the channels you wish to add to the Remote group – for example, press **SEL** on faders 1 to 8.

Note

Note that you will only be able to select channels if the processing is valid. For example, you cannot select insert on/off for a channel which has no insert assigned!

4. Release the **REM** switch and the assignment is made.

To operate the programmed function:

1. Press the **REM** switch.

The selected on/off functions on the selected channels are switched on or off with one button press – in our example, insert on/off for faders 1 to 8.

You can confirm this by looking at the Main Mix display for any of the channels in your Remote group.

⏩ Flip

1. Press the **Flip** switch to flip channels assigned to the Smart Panel onto the console's 48 Fader strips (and channels assigned to the Fader strips onto the Smart Panel).

The Main Mix display follows your Desk vs Smart Panel selection.

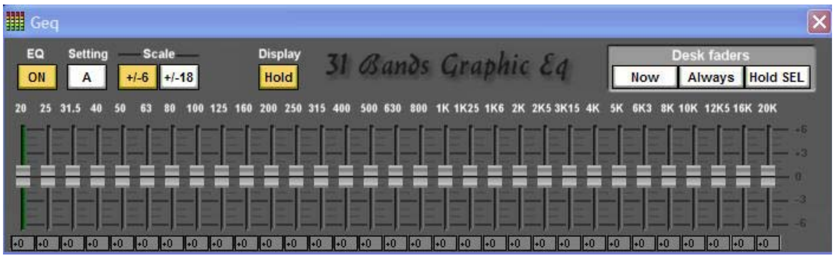
2. You can now use the Fader strips to quickly set levels and panning.
3. When you have finished, remember to deselect the **Flip** switch to return the console to its normal mode of operation.

⏩ GEQ Editor

This switch provides quick access to the Geq Editor window and maps the graphic EQ frequencies onto the console faders, see Page 180.

1. Press **SEL** on an output channel with Graphic EQ processing – e.g. an Aux routed to a UM8 output.
2. Then press the **Geq** switch.

The Geq window for the selected aux opens, and the frequencies are automatically assigned onto the console faders:


Geq
EQ
ON
Setting
A
Scale
+/-6
+/-18
Display
Hold
31 Bands Graphic Eq
Desk faders
Now
Always
Hold SEL
20 25 31.5 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1K25 1K6 2K 2K5 3K15 4K 5K 6K3 8K 10K 12K5 16K 20K
+6
+3
0
-3
-6

3. When you have finished making changes, turn off the **Geq** button to return the faders to their normal operation.

⏩ OK and Cancel

Short cut keys for **OK** and **Cancel**. These switches perform the same functions as the buttons to the right of the trackball.

⏩ Next Page and Previous Page

These switches will load the next or previous page and are the same as the **Next** and **Prev** buttons on the FILES/AUTO panel.

Clearing All Assignments

The KEYS CONFIG **CLEAR** button can be used to clear all VU, rotary control and switch assignments.

Note

Note that you cannot undo this operation, unless you have saved the assignments (see below).

1. Select the KEYS CONFIG **CLEAR** button.
2. Confirm by pressing **OK**.

Saving and Loading Assignments

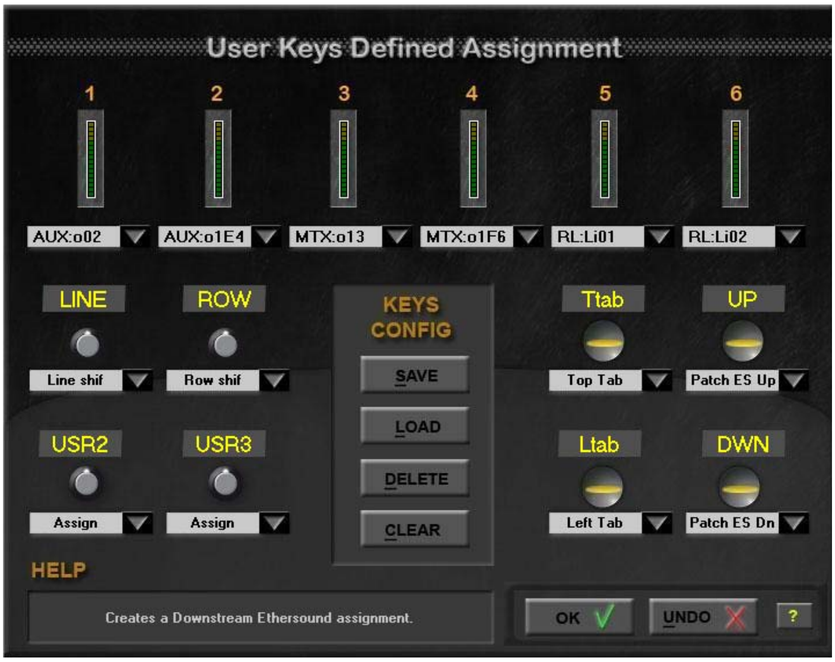
The User Defined panel assignments are saved when you use either “**File** -> **Save**” or “**File** -> **Save As**”.

However, you can also create different Key Configurations so that they can be loaded while patching, mixing FOH or mixing monitors. The Keys Config file saves all VU, rotary control and switch assignments onto the Nova PC within the USER folder.

⏩ To save a Keys Config

1. First assign the VU meters, rotary controls and switches to the desired functions.

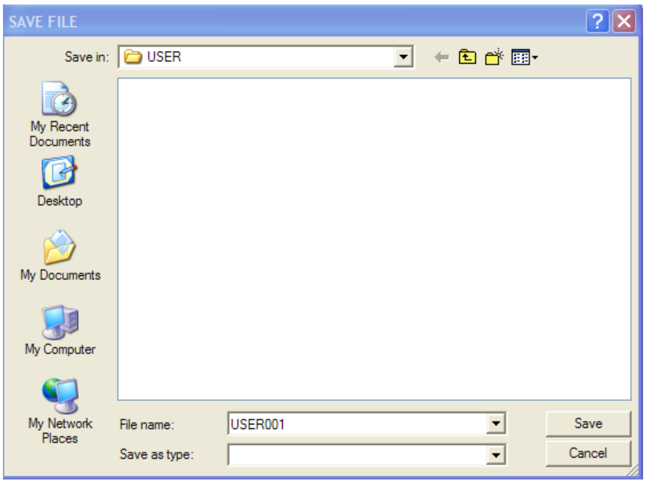
In our example, we have a configuration suitable for patching:



Creates a Downstream Ethersound assignment.

2. Then select the KEYS CONFIG **SAVE** button.

A window requesting a filename appears on the Nova screen:



File name: USER001

Save as type:

3. Type in a name on the console keyboard – e.g. **Patching**.
4. Confirm by pressing **OK** or clicking on **Save**.

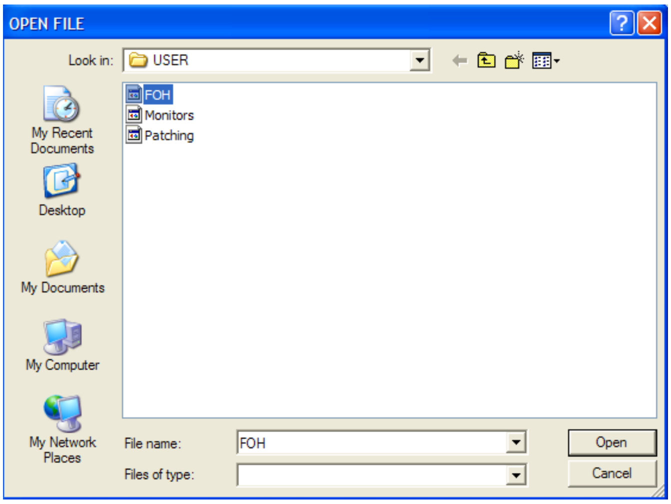
Nova now saves all the User Defined panel assignments into a Keys Config file.

⏩ To load a Keys Config

To load a different configuration:

1. Select the KEYS CONFIG **LOAD** button.

A file selection window appears on the Nova screen:



File name: FOH

Files of type:

2. Select the configuration you wish to load.
3. Confirm by pressing **OK** or clicking on **Open**.

The assignments are loaded to the User Defined panel.

⏩ To delete a Keys Config

To delete a Keys Config file:

1. Select the KEYS CONFIG **DELETE** button.

A file selection window appears on the Nova screen.

2. Select the file you wish to delete.
3. Confirm by pressing **OK** or clicking on **Open**.

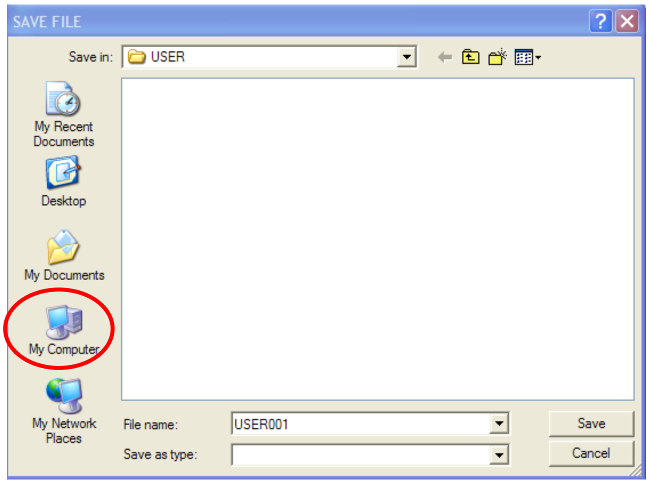
Note

Note that the file is deleted immediately; there is no additional level of confirmation.

⏩ To export a Keys Config

Each Keys Config file can be saved to (or loaded from) a USB stick so that configurations may be transferred between consoles.

Repeat the steps for saving (or loading) a Keys Config file, but in the file selection window, use the My Computer option to access your USB drive:



Save in: USER

File name: USER001

Chapter 7: Reset and Automation

Introduction

This chapter explains the reset capabilities of the console and covers the operation of Files, Pages, Play List Automation, Processing Libraries and Personal Mixes.

- Files and Pages – Page 342.
- The Play List (Automation) – Page 364.
- Processing Libraries – Page 382.
- Personal Mixes – Page 387.

Note

Note that other settings which can be stored and recalled include the Default Patch memories, see Page 288, and the User Defined panel Key Configurations, see Page 322.

Files and Pages

Console settings are stored and recalled from “Files” where each File may contain one or more “Pages”. Think of each File as your show, and each Page as a snapshot of settings to be loaded during that show.

Each Page is a snapshot of all the settings for the entire console at a particular moment in time. This includes the current status of your mix, input and output patching, etc.

Every File contains at least one Page. By creating multiple Pages, you can play out a sequence of different setups during the live show. For example to recall a new mix at the beginning of each song.

Page changes can be triggered manually, or automated such that they respond to MIDI timecode (MTC) or MIDI Program changes. Likewise Page changes from the console can output MIDI Program changes to external devices – for example, to reset outboard effects. Crossfades may also be programmed for smooth transitions between Pages.

What’s Stored Where

Files are stored on the Nova control computer and may be exported to USB for transfer to other systems.

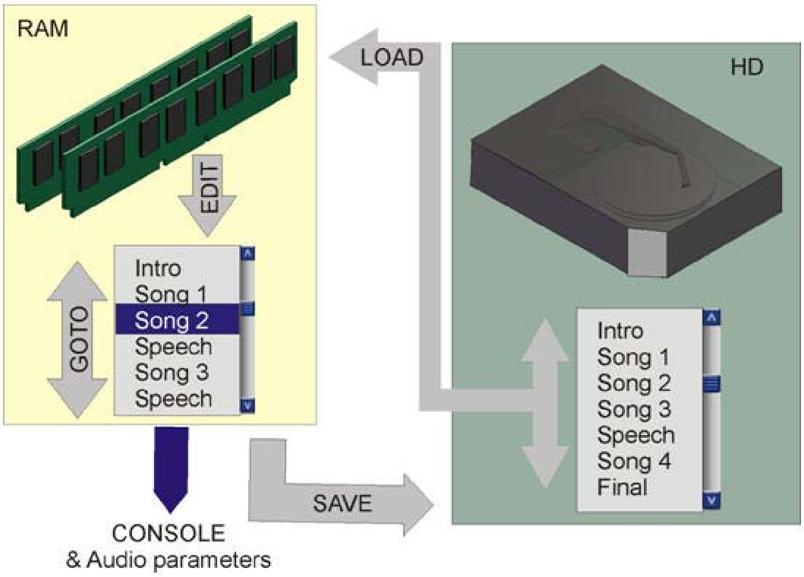
Each File can contain up to 1000 Pages.

Pages store the settings required for a new mix; everything from your EQ to input patching. Pages do not store the following elements; these elements are stored as a one-time setup within the File:

- The **Personal Console Builder** configuration
- The **User Defined Panel** assignments
- **Personal Mixes**
- **General Preferences**
- **Monitoring Preferences**
- **System Clock Source**
- The **Play List** and **Play List Settings**
- **DioCore Configuration**
- The **RELAX** grid

Data Structure

The Nova computer includes an internal hard disk (HD) and memory (RAM) for storing and holding File and Page data:



Files are stored permanently on the hard disk (HD); each File may contain up to 1000 Pages.

Each Page is a single snapshot of the console's settings. The Pages to be played out during a show are held in temporary memory (RAM). The current Page is the console settings right now – in our example, **Song 2**. When you update the console, you update the current Page.

You can use the **GOTO** command to reset the console by loading Pages held in memory.

To store settings permanently to hard disk you must use a **SAVE** function:

- **Save File** – saves all Pages in RAM to the active File on hard disk.
- **Save Page** – saves the current Page (in RAM) to the active File on hard disk.

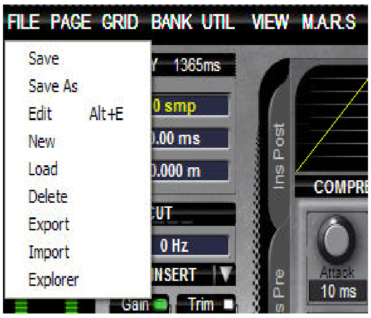
If you do not save the File or Page, and power off the console or load a different File, you will lose the Pages in RAM.

To load settings from hard disk, you can choose:

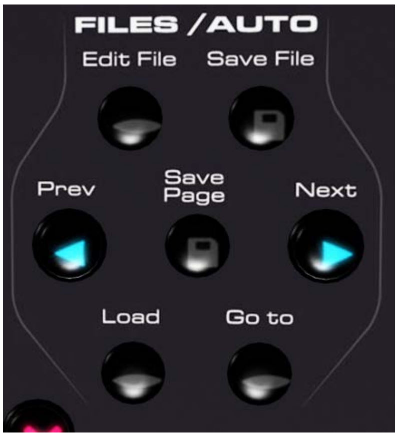
- **Load File** – loads a File (all Pages) from hard disk to RAM; the current Page resets the console. Note that this function replaces the Pages held in RAM, so make sure to save any Pages before you Load a File.
- **Load Page** – loads a single Page from the active File on hard disk to RAM; this Page becomes the current Page and resets the console. Note that this function replaces the current Page held in RAM.

File Management

File operations are managed from the **FILE** main menu:



In addition, you can open the **EDIT** display and save a File using the **Edit File** and **Save File** buttons on the FILES/AUTO panel:



This section deals with all File operations except the **EDIT** display, see Page 361.

Loading a File

Loading a File loads a set of stored Pages from hard disk to RAM, and resets the console to whichever Page was current when the File was last saved.

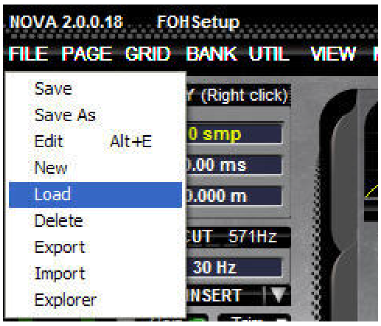
Warning

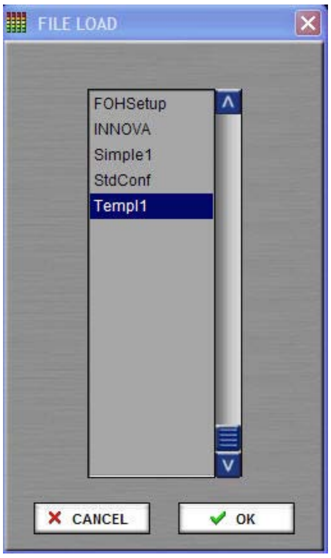
Warning

When you load an unknown file you may load settings which cause audio to pass through the console. Therefore, make sure any amplifiers, headphones, etc. are turned off or at a safe operating level before you load.

To load a file:

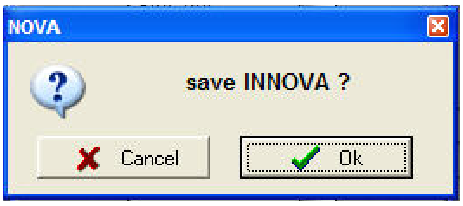
1. Using the trackball select "**FILE** -> **Load**" from the main menus.





2. Select the File you wish to load – e.g. **Templ1**.
3. Confirm by pressing **OK**.

The following dialogue box appears:


NOVA

save INNOVA ?

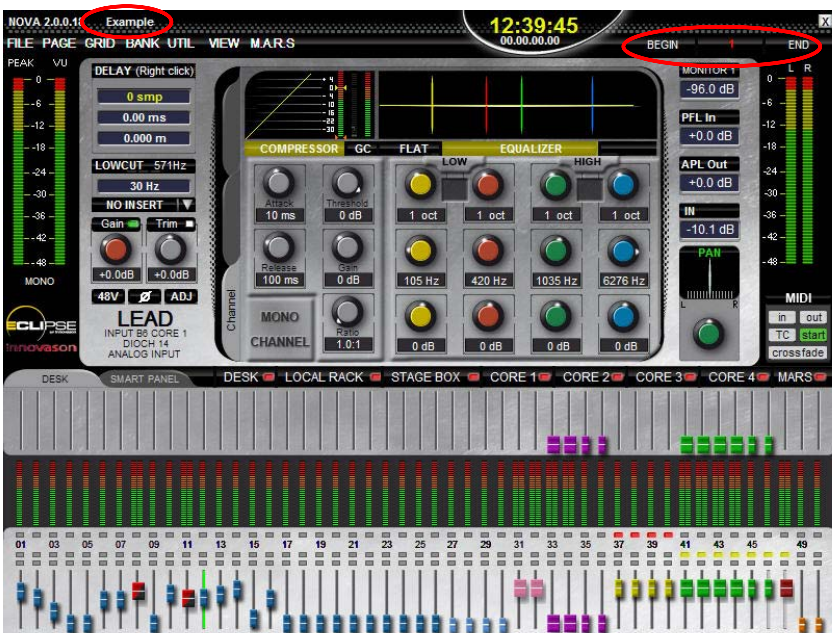
This is asking if you wish to save the current PAGE (in our example, **INNOVA**) before loading the File.

When you load a File, any Pages in RAM are replaced. Therefore, you will be asked if you wish to save each of these Pages before the load takes place.

4. If you have nothing new to save, press **CANCEL**.

The Nova software now loads the Pages from the selected File to RAM. When the load is complete, the console controls reset to the current Page.

The active File and previous, current and next Page names are shown at the top of the Main Mix display:



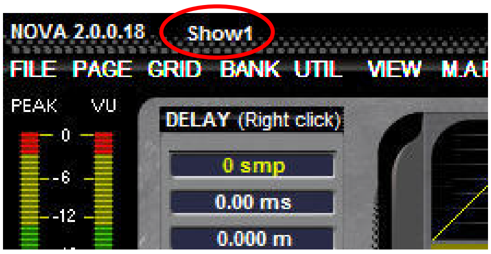
Note that you can isolate channel parameters so that they are not reset using the **Relax** function, see Page 404.

Saving a File

To store all the Pages in RAM permanently to hard disk you must save a File. You can use either of the following:

- "**File -> Save**" – saves all the Pages in RAM into the active File.
- "**File -> Save As**" – saves all the Pages in RAM into a new File which you can name.

Remember that the active File name is displayed at the top of the Main Mix display:

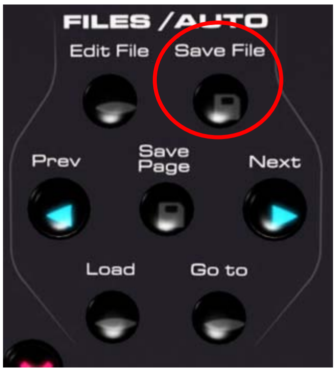


If you've already created a new user File, then "**File -> Save**" is the quickest method. If not, use **Save As**. This way you won't overwrite someone else's File!

⏩ File -> Save

To save the active File:

1. Press the **Save File** button on the FILES/AUTO panel:



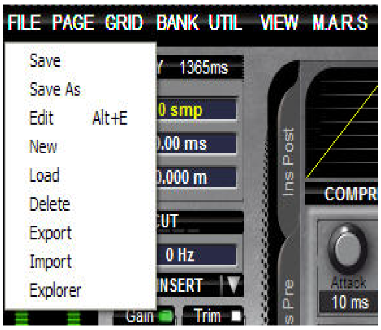
The button lights (red) as data is writing to the hard disk.

All Pages from RAM have now been saved into the active File.

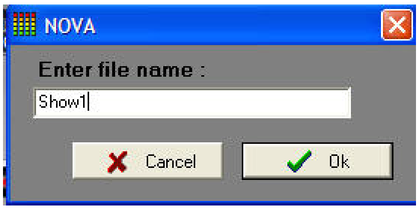
ECLIPSE	**Save File** **(FILES / AUTO)**
🖱	**"FILE -> Save"**
⌨	**n/a**

⏩ File -> Save As

1. Using the trackball select "**FILE** -> **Save As**" from the main menus.



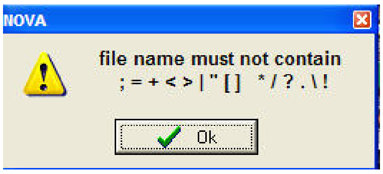
A window requesting a File name appears on the Nova screen:



Enter file name :
Show1

2. Type in a name on the console keyboard – e.g. **Show1**.

Note that the file name is limited to 8 characters, and cannot contain spaces or invalid characters:

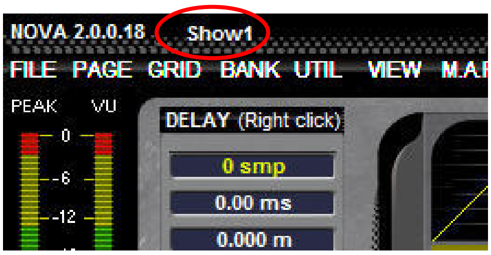


file name must not contain
; = + < > | " [ ] * / ? . \ !

3. Confirm by pressing **OK**.

Nova now saves all Pages within the desk memory into a new File on its hard disk called **Show1**. You will see the progress of the save.

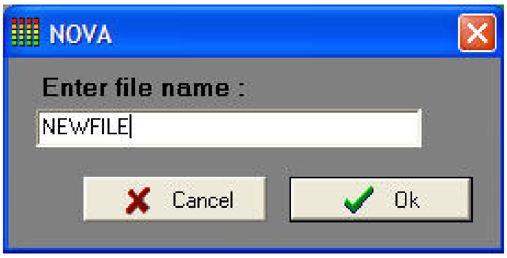
When the Save is complete, the new File name appears at the top of the Main Mix display:



Saving a Default File

This function lets you save a default configuration which will be offered each time the user creates a new File using the "**File -> New**" command. This allows you to prepare a template which can be used whenever the user starts a new show.

1. Configure the console with the default Page settings you wish to store. The template may contain multiple Pages if you wish.
2. Select "**File** -> **Save As**".
3. Enter the following file name:



NOVA

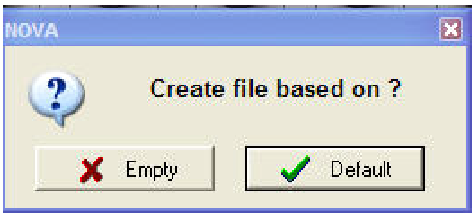
Enter file name :

NEWFILE

4. Press **OK**.

All Pages in RAM are stored in a File named "NEWFILE".

From here on, whenever you select "**File -> New**", you will be asked if you wish to use the Default file:



NOVA

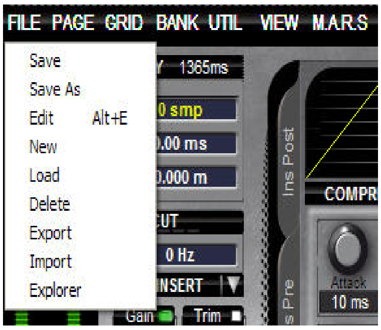
Create file based on ?

- Click on **Default** (or press **OK**) to create a new file based on the template (NEWFILE).
- Click on **Empty** to create a new empty File with a single empty Page – blank Page, no Labels, patches, settings, etc.

Creating a New File

You can create a new File which is either empty or uses the Pages stored in the Default **NEWFILE**.

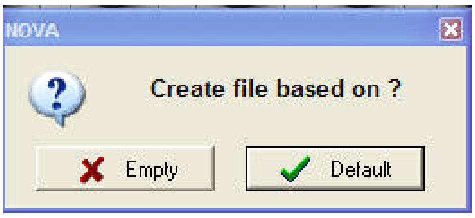
Note that when you create a new File, you will lose Pages held in memory so make sure you save before creating a new File.



To create a new File:

1. Using the trackball select "**FILE** -> **New**" from the main menus.

If the hard disk contains a File named "NEWFILE" then the following pop-up will appear:

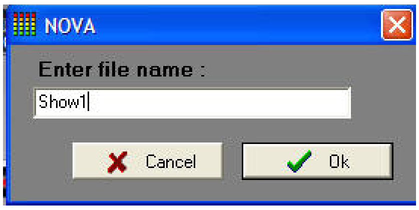


Create file based on ?

- Click on **Default** (or press **OK**) to create a new file based on the template (NEWFILE).
- Click on **Empty** to create a new empty File – blank Page, no Labels, patches, settings, etc.

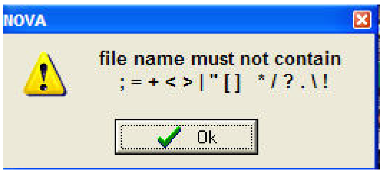
If this pop-up does not appear, then the Nova hard disk does not contain a default File (NEWFILE), and the new File will automatically be Empty.

2. Next, type in a name on the console keyboard – e.g. **Show1**:



Enter file name : Show1

Note that the file name is limited to 8 characters, and cannot contain spaces or invalid characters:



file name must not contain
; = + < > | " [ ] * / ? . \ !

3. Confirm by pressing **OK**.

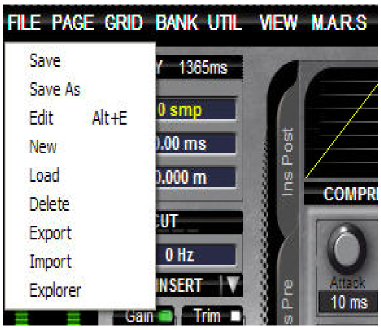
Nova now creates a new File on its hard disk called **Show1**. If this is an empty File, then it will contain one Page given a default name of **INNOVA**. The File and Page names appear at the top of the Main Mix display.

Deleting a File

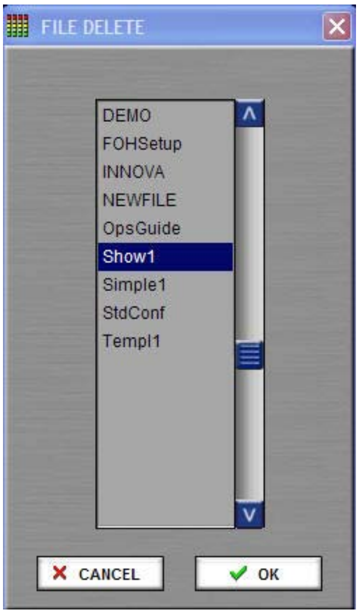
Deleting a File removes the File and all of its Pages from the Nova hard disk. To prevent accidental deletion, the active File may not be deleted.

Note that when you create a new File, you will lose the current console settings and any Pages held in memory.

To delete a File:



1. Using the trackball select “**FILE** -> **Delete**” from the main menus.



2. Select the File you wish to delete – e.g. **Show1**.
3. Confirm by pressing **OK**.

To prevent accidental deletion, a confirmation box appears:

4. Press **OK** again to confirm.

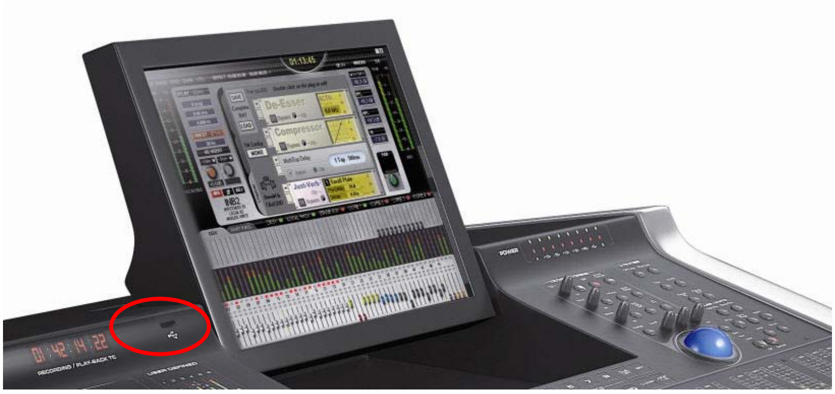
The File and all its Pages are removed from the hard disk.

Note that you cannot delete the active File. If you wish to do so, load a different File and then perform the delete.

File Import and Export

A File, and all its Pages, may be imported and exported to a USB device for archiving or to transfer settings between consoles.

1. Connect your USB device to the NOVA USB port:



Note that Innovason cannot guarantee compatibility with all available USB interfaces. Therefore, please check the compatibility of your USB interface on your system.

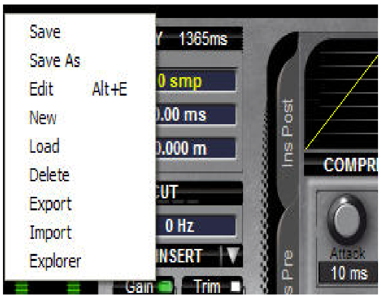
Warning

⚠ Warning

DO NOT remove the USB device while data is being transferred. To do so may corrupt the data.

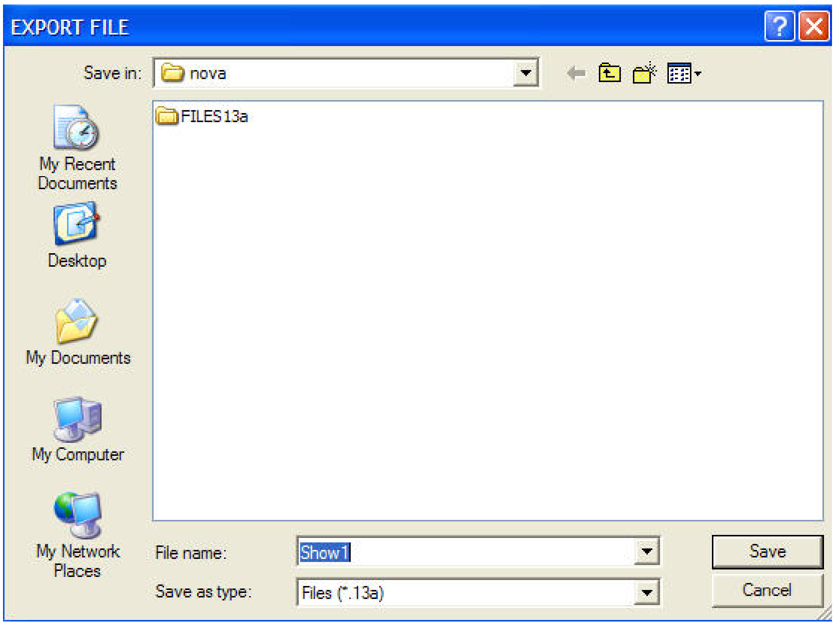
⏩ File -> Export

This command exports the active File (all Pages).



1. First load the File so that it becomes active, or save the File so that any temporary Page settings are written to the File on hard disk.
2. Using the trackball select "**FILE** -> **Export**" from the main menus.

You will be presented with a File Explorer window:



Save in: nova

File name: Show1

Save as type: Files (*.13a)

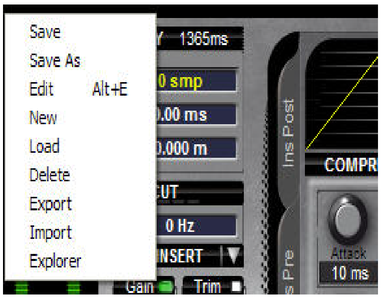
3. Select your destination (e.g. the USB device) and click on **Save**.

*The File is copied to the selected destination and saved with a **.13a** file extension.*

If a File of the same name already exists then you will be asked if you wish to replace it.

4. Once the export is complete, you can remove the USB device.

⏩ File -> Import

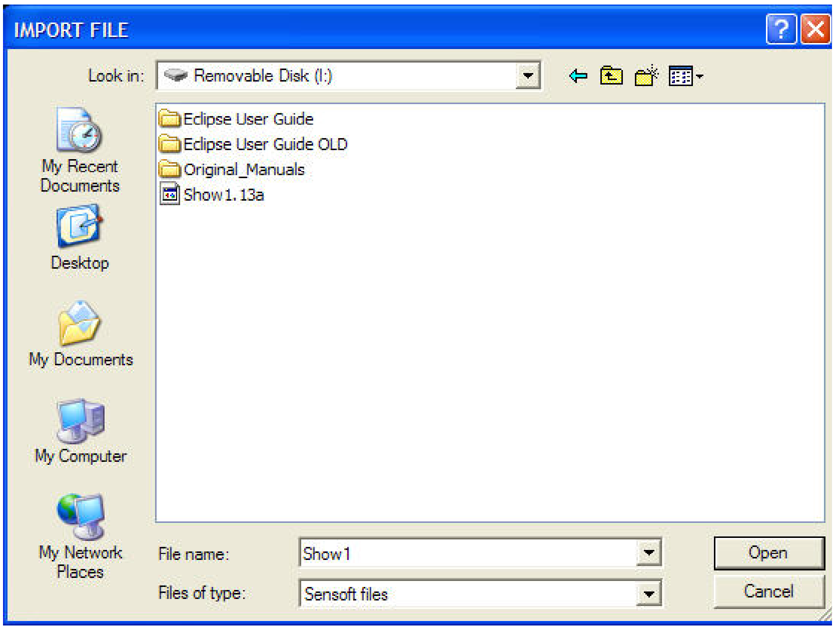


This command imports a File (all Pages).

1. Using the trackball select “**FILE** -> **Import**” from the main menus.

You will be presented with a File Explorer window.

2. Select the Nova file (type *.13a) you wish to load:

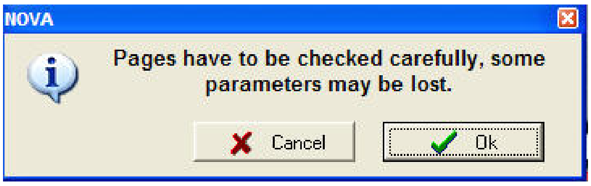


File name: Show1

Files of type: Sensoft files

3. And click on **Open**.

The following dialogue box appears:



Pages have to be checked carefully, some parameters may be lost.

If you are importing a File to a different console, then it is possible that some Page settings may not be compatible. For example, if one system has different I/O cards to another, then only parameters consistent between the two systems may be imported.

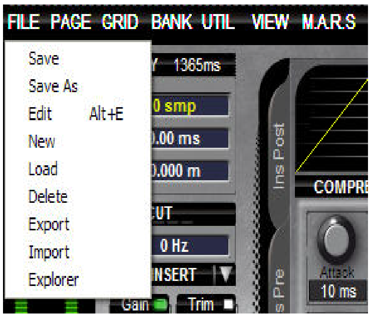
4. Click on **OK**.

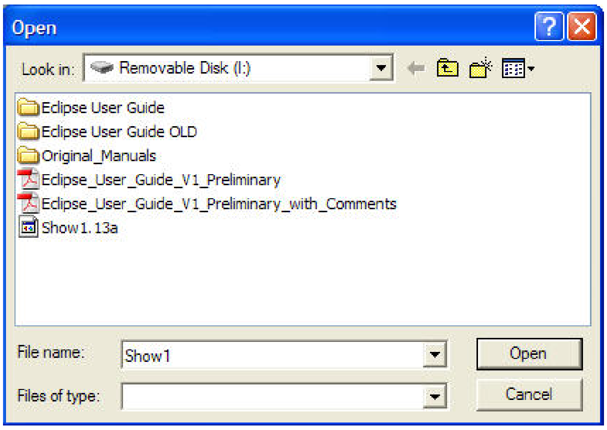
The File is imported to the hard disk.

5. Use “**File -> Load**” to load the File as described on Page 345.

⏩ File -> Explorer

This command opens a File Explorer window which you can use to locate different types of data file:





Look in: Removable Disk (I:)

File name: Show1

The following file types can be imported and exported on Eclipse:

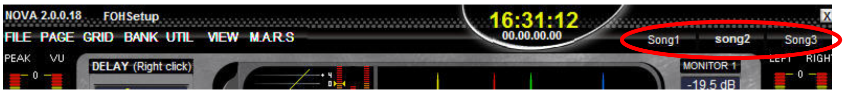
- *.13a – a File (may contain up to 1000 Pages plus Personal Mixes)
- *.lib – a Processing Library
- *.JustVerb – an Internal Effects preset
- *.bay – an Internal Effects Bay setting
- User Defined Panel (Keys Config) configuration

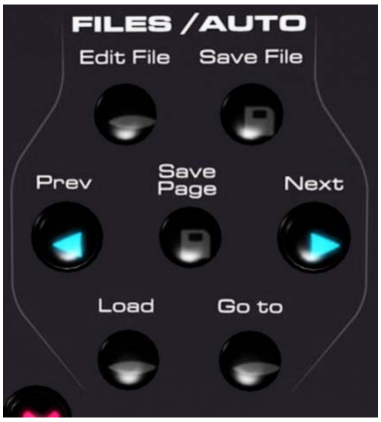
See Pages 382, 303, 306 and 322 for more details on processing libraries, effects presets, effects bays and the User Defined panel.

Page Management

When working with a single setup, you can simply use the **Save File** command to save the current Page and File settings to the hard disk in one operation, see Page 347. However, if you wish to create a sequence of snapshots for playout during a show, then you will need to work with multiple Pages.

Up to 1000 Pages may be stored within each File; the names of the previous, current and next Pages are always shown at the top right of every Nova display:

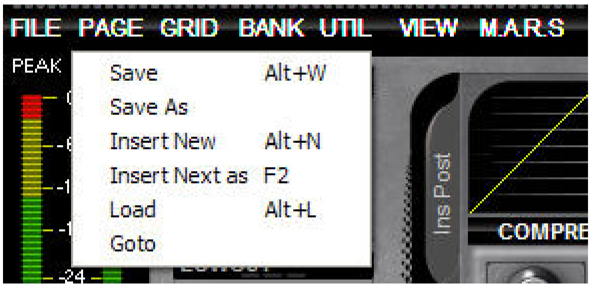




The **Next** and **Prev** buttons on the FILES/AUTO panel step through the Pages in order – in our example, press **Next** to recall **Song3**; press **Prev** to recall **Song1**.

If a File contains less than three Pages then you will see the names **BEGIN** and **END** either side of the current Page name. These are not Pages, but indicate the beginning and end of the sequence.

Pages are managed from the **PAGE** main menu:



In addition, you can use the **Save Page**, **Load** and **Goto** buttons to save a Page, load a Page from hard disk, or Goto a Page held in memory:

This section deals with Page management and manual sequence playout. For more details on automation and crossfades, see Page 364.

Inserting a Page

There are two ways to create a new Page on Eclipse:

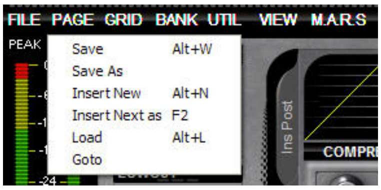
- **Insert New** – inserts a blank Page between the current and next Pages.
- **Insert Next As** – inserts a copy of the current Page between the current and next Page with a new name.

The **Insert Next As** function is the fastest way to create a sequence of Pages, each based on the current Page.

Tip

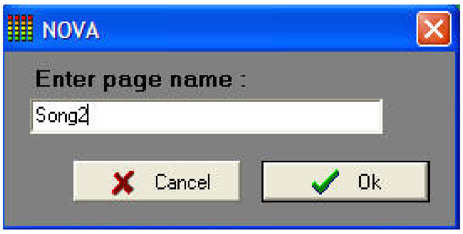
Both operations are similar. Let's take an example where you have a single Page named **Song1** and wish to use this as the starting point for a new Page:

1. Using the trackball, select "**PAGE**-> **Insert Next as**" from the main menus, or press [**F2**] on the console keyboard.



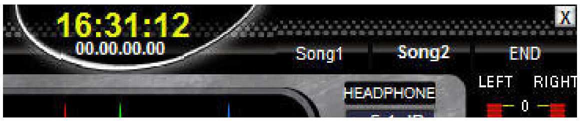
A switch on the User Defined panel can also be assigned to this function, see Page 322.

2. Type in a name for the Page – **Song2** – and press **OK**:



Enter page name :
Song2

*A new Page called **Song2** is created and becomes the current Page:*



To insert a blank Page, repeat these steps but select "**PAGE -> Insert New**" from the main menus or press [**ALT**] + [**N**] on the console keyboard.

Recalling a Page (Load Page and Goto)

Having created a number of Pages, you can use the **Next** and **Prev** buttons to step through the Pages in memory, see Page 363.

Or, the following functions to jump to any Page:

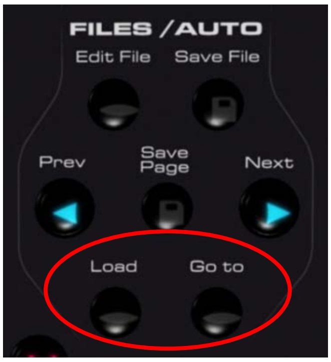
- **Goto** – loads a Page from memory (RAM).
- **Load Page** – loads a Page from the active File on disk.

Note

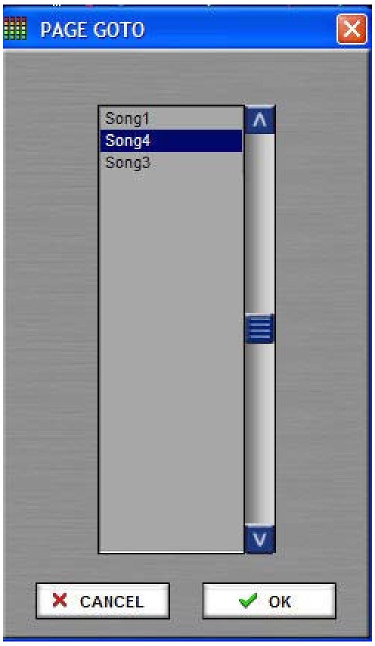
Note that the **Load Page** function replaces the current Page held in RAM, whereas **Goto** simply switches to a different Page. This means that if you have been mixing and use **Goto**, when you return to the previous Page your mix will remain intact. Whereas, if you use **Load Page**, your mix settings have gone, unless you saved them before using **Load Page**. So, only use **Load Page** if you don't like the settings in the current Page, and wish to revert to something saved earlier.

Both operations are similar:

1. Press **Goto** or **Load** on the FILES/AUTO panel:



A selection window appears.



Note that the Page list in RAM may differ from the Page list on disk so the **Goto** and **Load Page** options may not be identical.

2. Select the Page – e.g. **Song4**.
3. Confirm by pressing **OK**.

The console settings update.

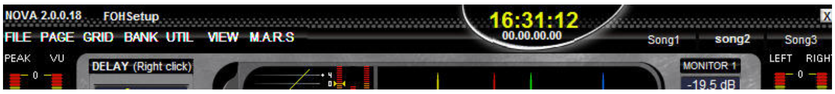
Note that you can isolate channel parameters so that they are not reset using the **Relax** function, see Page 404.

Saving a Page

As you work, you may wish to save a single Page to hard disk, rather than saving all Pages using Save File.

The **Save Page** function saves the current Page in RAM into the active File on disk.

Note that if a Page of the same name is already stored in the File, then it will be replaced when you save. For example, using **Save Page** in the example below saves **Song2** into the File named **FOHSetup**. If a Page named **Song2** already existed in this File then it is overwritten:



You can use either of the following to save the current Page:

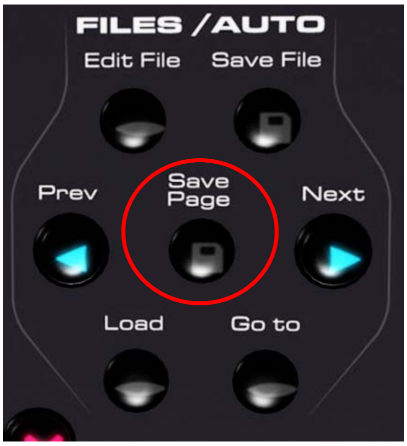
- "**Page -> Save**" – saves the Page under its existing name.
- "**Page -> Save As**" – saves the Page with a new name.

⏩ Page -> Save

ECLIPSE	**Save Page** **(FILES / AUTO)**
🖱	**"PAGE -> Save"**
⌨	**[ALT] + [W]**

To save the Page:

1. Press the **Save Page** button on the FILES/AUTO panel:

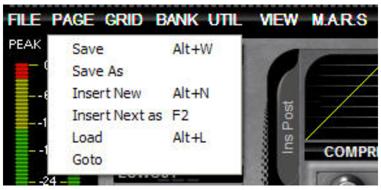


The button lights (red) as data is writing to the hard disk.

The current Page in RAM has now been saved into the active File.

Page -> Save As

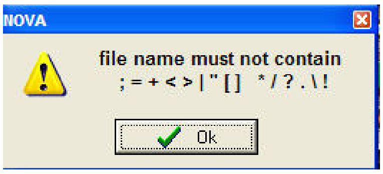
1. Using the trackball select “**PAGE** -> **Save As**” from the main menus.



A window requesting a Page name appears.

2. Type in a name on the console keyboard – e.g. **Song4**.

Note that the file name is limited to 8 characters, and cannot contain spaces or invalid characters:

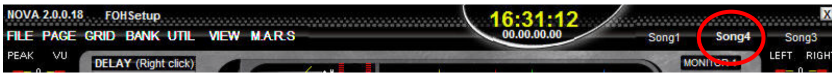


file name must not contain
; = + < > | " [] * / ? . \ !

3. Confirm by pressing **OK**.

Nova now saves the current Page in RAM into a new Page on disk called **Song4** within the active File (**FOHSetup**). You will see the progress of the save.

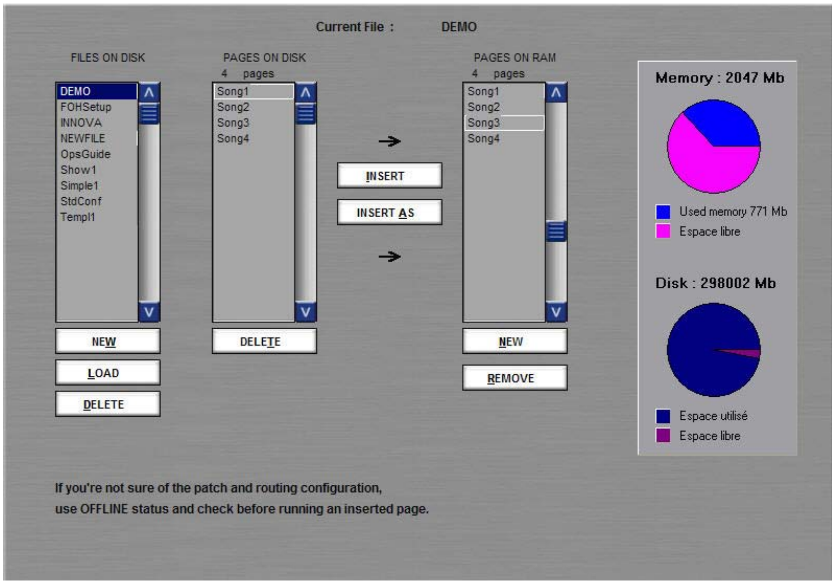
When the Save is complete, the new Page becomes the current Page as shown at the top of the Nova display:



The Edit Display

The **EDIT** display provides a complete overview of all Files and Pages on disk and in memory, and is a great way to change the Page order for a sequence:

1. Select the **EDIT** display by pressing the **Edit File** button on the FILES/AUTO panel.



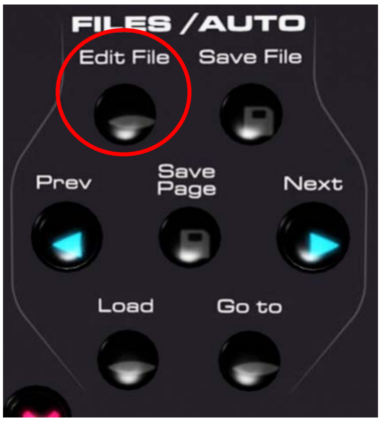
Current File : DEMO

Memory : 2047 Mb

Disk : 298002 Mb

If you're not sure of the patch and routing configuration, use OFFLINE status and check before running an inserted page.

	Edit File **(FILES / AUTO)**
	"FILE -> Edit"
	[ALT] + [E]



The main part of display consists of three indexed columns. From here you can create New Files and Pages, change the Page order in RAM, Insert Pages from different Files, etc. On the right of the display you can view the Memory (RAM) and Disk (hard disk) usage.

⏩ FILES ON DISK

This column lists all the Files saved on the Nova hard disk.

1. Select a File, and the middle column updates to show the Pages contained in the selected File (e.g. **DEMO**).

The screen buttons below **FILES ON DISK** allow you to:

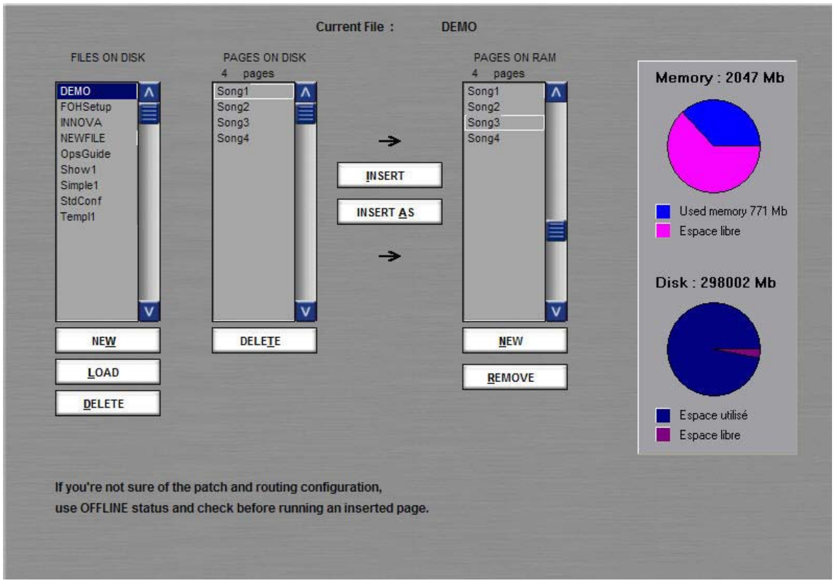
- Create a **NEW** file – identical to "**File -> New**".
- **LOAD** all Pages from the File into RAM - identical to "**File -> Load**".
- **DELETE** the selected File - identical to "**File -> Delete**".

⏩ PAGES ON DISK

This column lists all the Pages contained in the selected file (e.g. **DEMO**) on hard disk.

- The **DELETE** button will delete a Page from the File, and therefore from the hard disk.

⏩ PAGES ON RAM



Current File : DEMO

If you're not sure of the patch and routing configuration,
use OFFLINE status and check before running an inserted page.

This column lists all the Pages being edited in RAM – this is your sequence.

It is these Pages which will be played out using the **Next** and **Prev** buttons on the FILES/AUTO panel, and automated from the **Play List** window, see Page 364.

The screen buttons below **PAGES ON RAM** allow you to:

- Insert a **NEW** blank Page below the selected Page.
- **REMOVE** – removes the selected Page from RAM. Note that the Page is not removed from the File on hard disk, and can be re-inserted later using the **INSERT** buttons described below.

The screen buttons to the left of **PAGES ON RAM** allow you to:

- **INSERT** – inserts a Page from the **ON DISK** column to the **ON RAM** list. You can use this function to insert a Page from a different File, or insert multiple copies of the same Page.
- **INSERT AS** – as above, this button inserts a Page from disk to the RAM sequence, but allows you to rename the Page. Use this option when you wish to duplicate a Page so that you can make changes and save it back to a File.

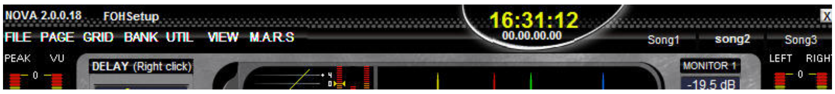
Note

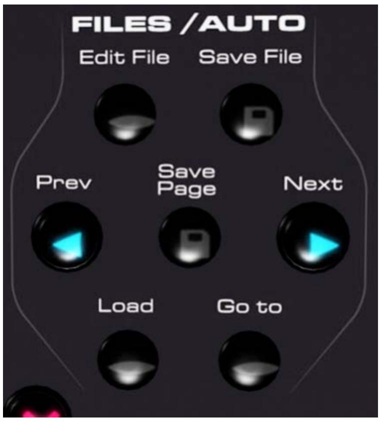
Note that a Page does not store the Personal Console Builder configuration. Therefore, if you insert a Page from a File with a different Fader/Smart Panel configuration, some elements may not load. Only elements which are consistent with the current PCB configuration can be recalled from an inserted Page.

Note that you can write a new channel setting into the Pages in RAM using the **Over Ram** function, see Page 399.

Sequence Playout

Having created and ordered a sequence of Pages, the following buttons can be used during the live show:





- **Next** - recalls the next Page in the sequence of Pages in RAM (e.g. **Song3**).
- **Prev** - recalls the previous Page in the sequence of Pages in RAM (e.g. **Song1**). This is very useful if you press **Next** a little early and need to quickly revert to the previous Page!

If the **Confirm previous/next page** check box is ticked in the **General Preferences** window, then you will be asked for confirmation when you use **Next** or **Prev**, see Page 428.

As soon as the Page is recalled, the previous, current and next Page names update at the top of the Nova display. If a crossfade has been programmed for the Page change, then it will be applied.

If you need to skip a Page - for example, the artist suddenly decides to change the running order, and jump from song 3 to song 7 – then you can use the **Load** or **Goto** buttons:

- **Load** – allows you to load a Page from those stored on hard disk (in the active File). Note that this option replaces the current Page.
- **Goto** – allows you to select a Page from RAM.

See Page 358 for details on **Load Page** and **Goto**.

Note that you can isolate channel parameters so that they are not reset when a Page is recalled using the **Relax** function, see Page 404.

⏩ Keyboard Shortcuts

Next, **Prev** and **Load** Page can be actioned from the console keyboard:

- **Next** – press [**PAGE UP**].
- **Prev** – press [**PAGE DOWN**].

Note that the [**PAGE UP**] and [**PAGE DOWN**] keyboard functions action an instant Page change, even if the **Confirm previous/next page** check box is ticked in the **General Preferences** window.

- **Load** – press [**ALT**] + [**L**].
- **Goto** – no keyboard shortcut.

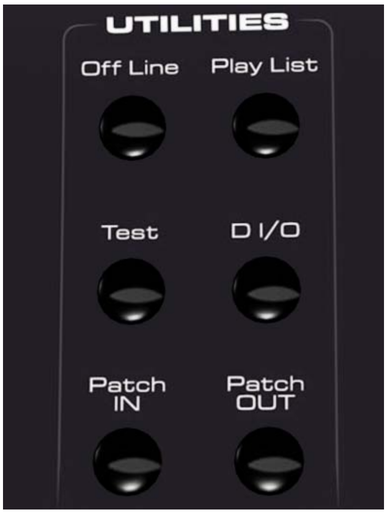
The Play List (Automation)

For a simple show, the **EDIT** display plus **Next**, **Prev** and **Goto** buttons provide everything you need to build a sequence of Pages and play them out manually.

However, the Eclipse includes an advanced automation system which allows you to recall Pages from MIDI Program changes (MIDI IN), send Midi Program changes (MIDI OUT), synchronise Page changes to Midi timecode (MTC) and set crossfade transitions between Pages. All these functions are defined from the **Play List**:

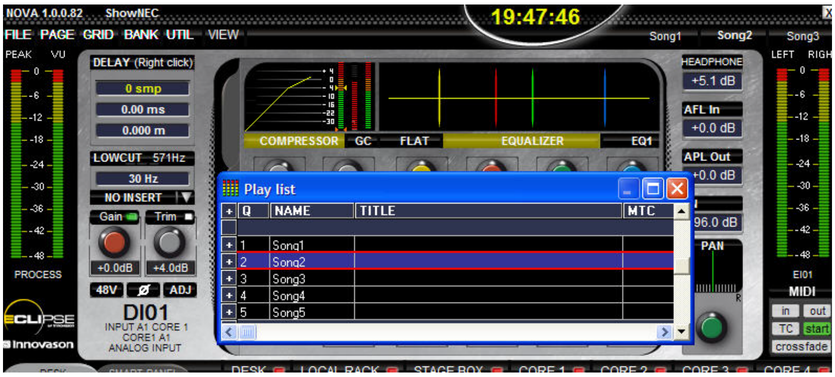
	Play List (UTILITIES)
	“UTIL-> Playlist”
	[F4]

1. Press the **Play List** button on the UTILITIES panel to open the window:



The **Play List** is a floating window which you can position anywhere on the Nova screen.

2. To manipulate the position of the **Play List**, use the traditional Windows procedures to resize and move the window:



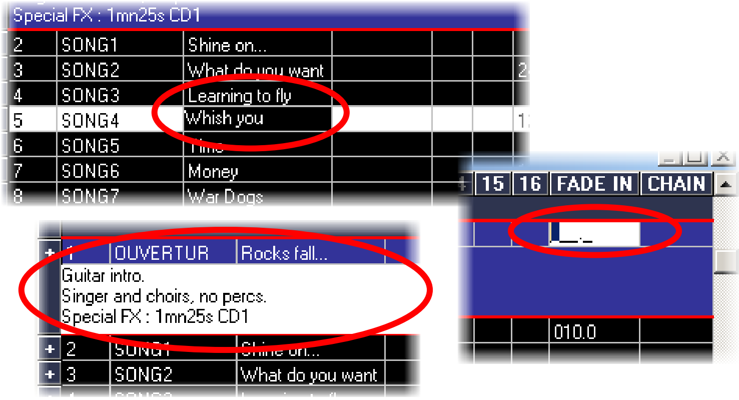
Play list

Q	NAME	TITLE	MTC
1	Song1		
2	Song2		
3	Song3		
4	Song4		
5	Song5		

Before we look at the **Play List** functions in more detail, first some general pointers on how to edit and display information.

Editing Values

1. To edit a value, double-click on the box (cell) containing the value:



Special FX : 1mn25s CD1

2	SONG1	Shine on...	
3	SONG2	What do you want	2
4	SONG3	Learning to fly	
5	SONG4	Whish you	1
6	SONG5	Time	
7	SONG6	Money	
8	SONG7	War Dogs	

1	OUVERTUR	Rocks fall...
	Guitar intro. Singer and choirs, no percs. Special FX : 1mn25s CD1	
2	SONG1	Shine on...
3	SONG2	What do you want

15	16	FADE IN	CHAIN
		010.0	

A cursor indicates that a cell is being edited, and the box remains highlighted until you exit the edit mode by pressing [**ENTER**], [**ESC**] or selecting another cell.

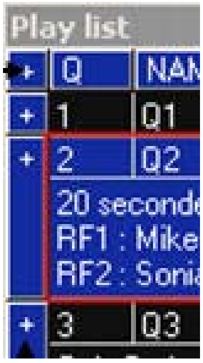
Tip

- When a cell is being edited, you can jump from one cell to another using the keyboard cursor keys, or [**TAB**], without leaving the editing mode. This is very convenient for quickly configuring MIDI program changes.
- The keyboard [**ENTER**] key validates the selected value and takes you out of the editing mode. Therefore, to type additional lines in a comment cell, use [**CTRL**]+[**ENTER**].
- To copy and paste text in a cell, use the [**CTRL**]+[**C**] and [**CTRL**]+[**V**] keyboard shortcuts.

Note that up to three lines of text may be displayed and saved in a Comment cell.

Arranging and Hiding Information

The following functions allow you to display or hide comment lines, and arrange or hide columns, thereby allowing you to focus on the most important information for the show.



Display or Hide Comment Lines

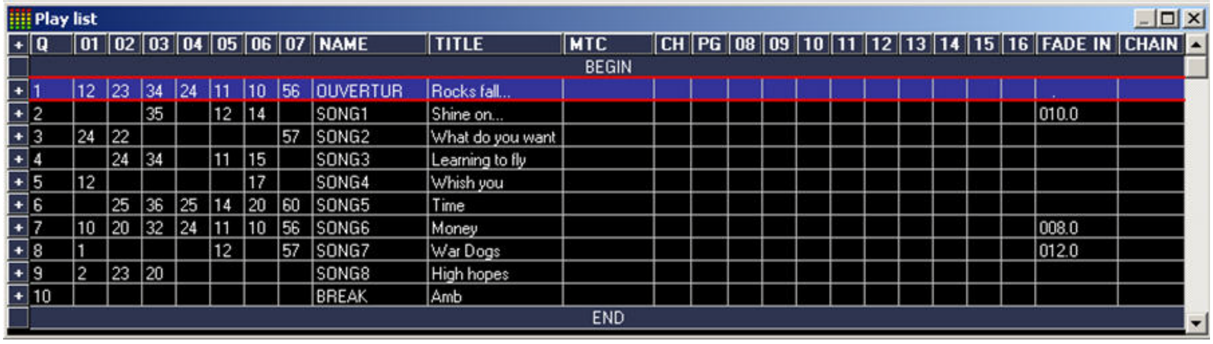
1. Double-click on the + button to display or hide comment lines for an individual Page.
2. Double-click on the + button at the top of the PlayList (beside **Q**), for the following global operations:

- 1st Double-click – hides comment lines for all Pages.
- 2nd Double-click – shows comment lines for all Pages.
- 3rd Double-click – shows comment lines for the current, previous and next Page.

Arranging Columns

1. Click on a column header and drag and drop to rearrange its position.

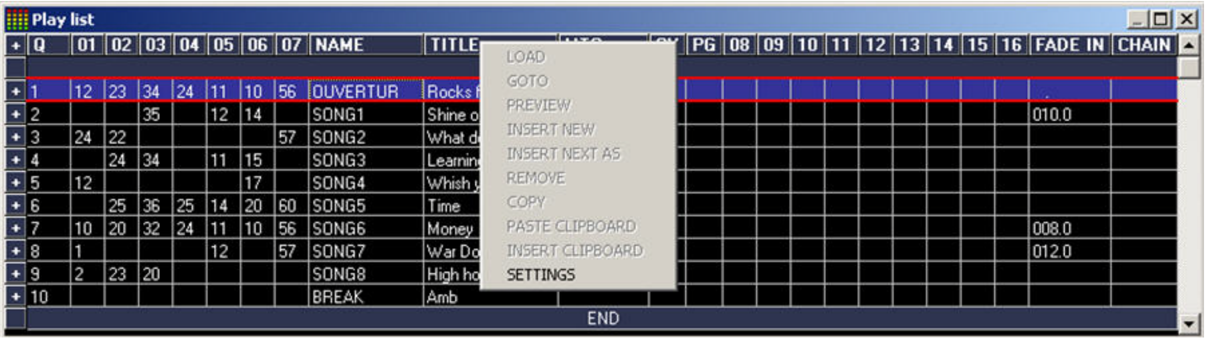
In the example below, it was important to see the MIDI program changes sent on channels 1 to 7 so these have been moved to the left of the **Play List**:


Play list

Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
BEGIN																							
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...														
2			35		12	14		SONG1	Shine on...													010.0	
3	24	22					57	SONG2	What do you want														
4		24	34		11	15		SONG3	Learning to fly														
5	12					17		SONG4	Whish you														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Dogs													012.0	
9	2	23	20					SONG8	High hopes														
10								BREAK	Amb														
END																							

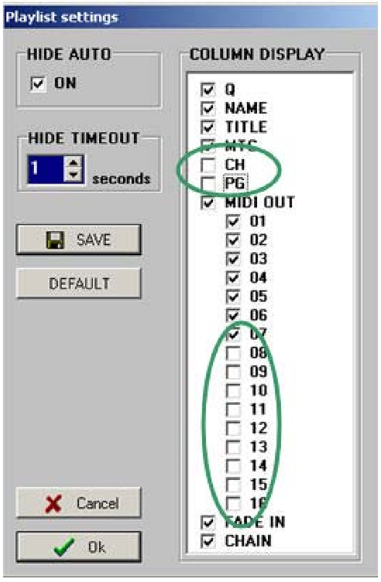
⏩ Hiding Columns

1. Right-click anywhere in the **Play List** and select **SETTINGS** from the drop-down menu:



Q	01	02	03	04	05	06	07	NAME	TITLE			PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
1	12	23	34	24	11	10	56	OUVERTUR	Rocks f													.	
2			35		12	14		SONG1	Shine o													010.0	
3	24	22					57	SONG2	What d														
4		24	34		11	15		SONG3	Learnin														
5	12					17		SONG4	Whish y														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Do													012.0	
9	2	23	20					SONG8	High ho														
10								BREAK	Amb														
END																							

*The **Playlist Settings** window appears:*



HIDE AUTO
☑ ON

HIDE TIMEOUT
1 seconds

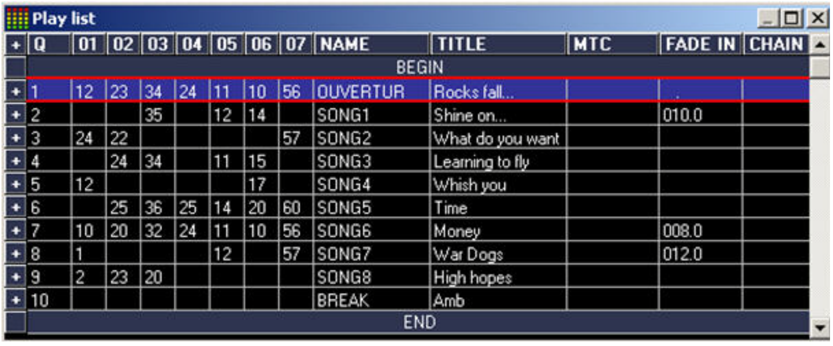
COLUMN DISPLAY
- ☑ Q
- ☑ NAME
- ☑ TITLE
- ☑ MTC
- ☐ CH
- ☐ PG
- ☑ MIDI OUT
  - ☑ 01
  - ☑ 02
  - ☑ 03
  - ☑ 04
  - ☑ 05
  - ☑ 06
  - ☑ 07
  - ☐ 08
  - ☐ 09
  - ☐ 10
  - ☐ 11
  - ☐ 12
  - ☐ 13
  - ☐ 14
  - ☐ 15
  - ☐ 16
- ☑ FADE IN
- ☑ CHAIN

2. Select **DISPLAY** at the top of the window.

You can now use the **COLUMN DISPLAY** options to hide any unwanted elements. In the example opposite, we have chosen not to display program changes for Pages (**CH** and **PG**), or program changes sent to MIDI channels 8 to 16.

3. When you have finished, press **OK**.

The simplified Play List looks as follows:

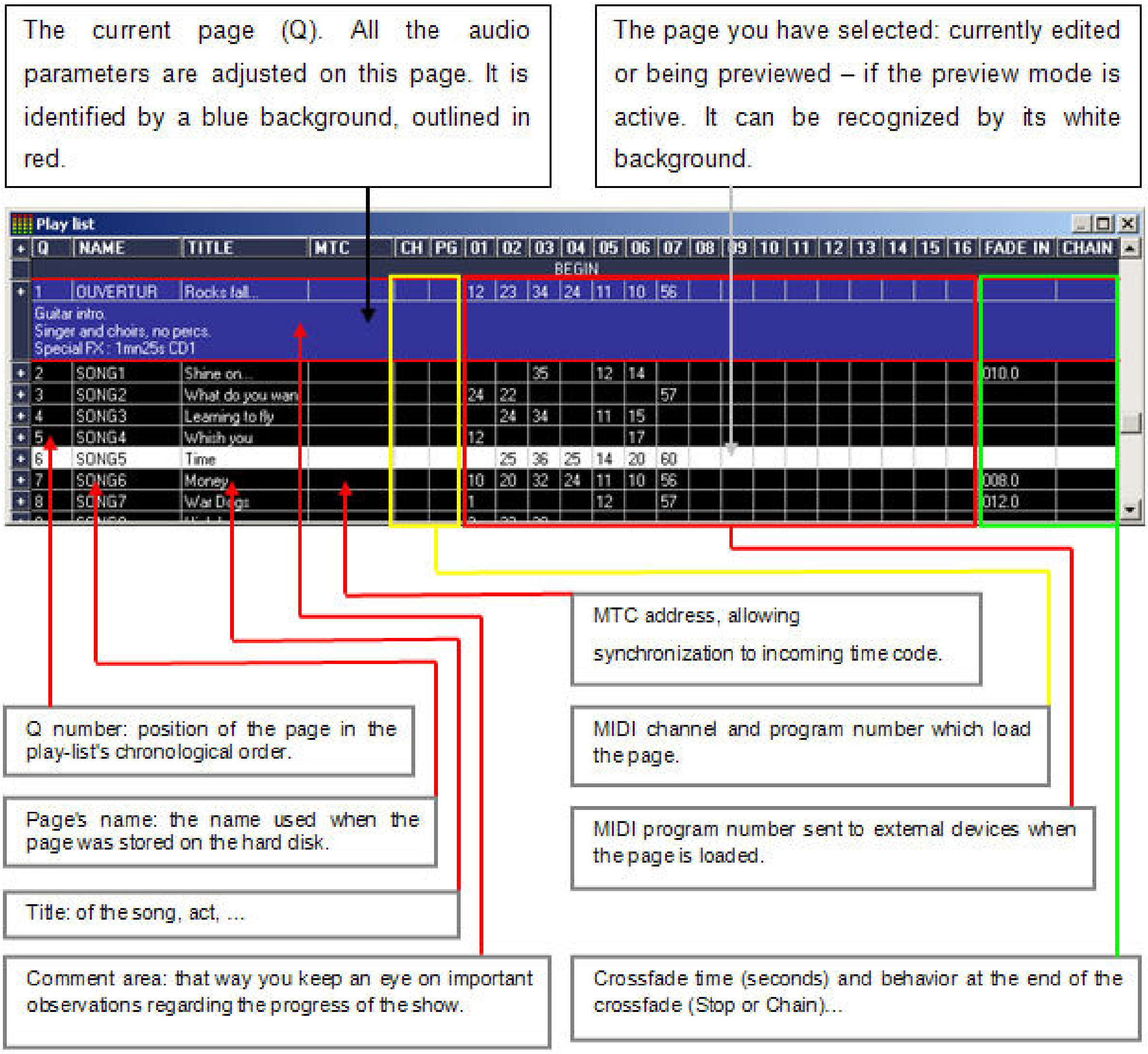


Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	FADE IN	CHAIN
BEGIN												
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...		.	
2			35		12	14		SONG1	Shine on...		010.0	
3	24	22					57	SONG2	What do you want			
4		24	34		11	15		SONG3	Learning to fly			
5	12					17		SONG4	Whish you			
6		25	36	25	14	20	60	SONG5	Time			
7	10	20	32	24	11	10	56	SONG6	Money		008.0	
8	1				12		57	SONG7	War Dogs		012.0	
9	2	23	20					SONG8	High hopes			
10								BREAK	Amb			
END												

You can find more details on the **Playlist Settings** window on Page 380, and the right-click menu functions on Page 379.

Play List Functions

The following diagram provides an overview of the **Play List**:



The current page (Q). All the audio parameters are adjusted on this page. It is identified by a blue background, outlined in red.

The page you have selected: currently edited or being previewed – if the preview mode is active. It can be recognized by its white background.

Play list

+	Q	NAME	TITLE	MTC	CH	PG	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
		BEGIN																						
+	1	OUVERTUR	Rocks fall...				12	23	34	24	11	10	56											
	Guitar intro. Singer and choirs, no percs. Special FX : 1mn25s CD1																							
+	2	SONG1	Shine on...						35		12	14											010.0	
+	3	SONG2	What do you wan				24	22					57											
+	4	SONG3	Learning to fly					24	34		11	15												
+	5	SONG4	Whish you				12					17												
+	6	SONG5	Time					25	36	25	14	20	60											
+	7	SONG6	Money				10	20	32	24	11	10	56										008.0	
+	8	SONG7	War Dogs				1				12		57										012.0	

MTC address, allowing synchronization to incoming time code.

Q number: position of the page in the play-list's chronological order.

MIDI channel and program number which load the page.

Page's name: the name used when the page was stored on the hard disk.

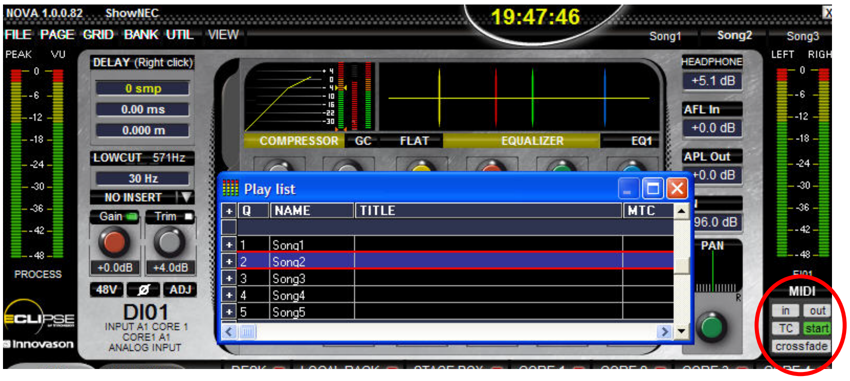
MIDI program number sent to external devices when the page is loaded.

Title: of the song, act, ...

Comment area: that way you keep an eye on important observations regarding the progress of the show.

Crossfade time (seconds) and behavior at the end of the crossfade (Stop or Chain)...

Note that most functions only become operational once the relevant Automation Enable button has been activated on the Main Mix display. See Page 381 for details:



Play list

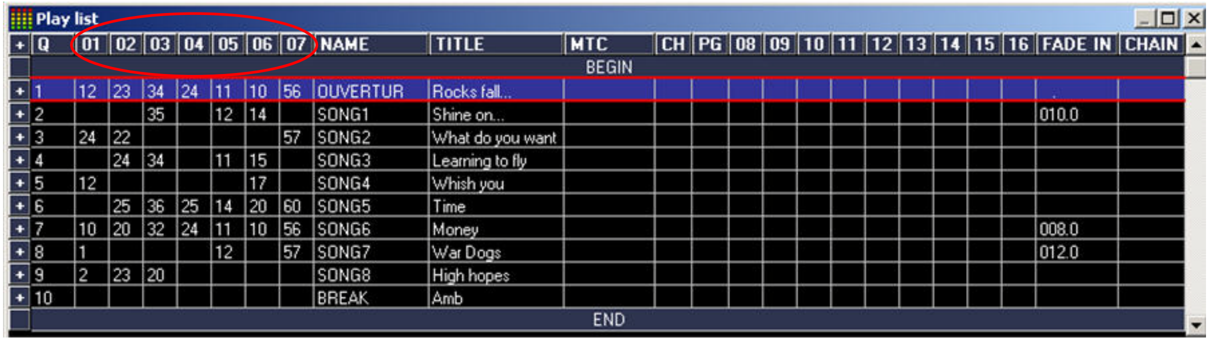
+	Q	NAME	TITLE	MTC
+	1	Song1		
+	2	Song2		
+	3	Song3		
+	4	Song4		
+	5	Song5		

Let's look at each function in more detail.

Sending MIDI Program Changes

When a Page is changed, it is possible to send a MIDI Program Change so that MIDI devices connected to the console, such as outboard effects, have their program number updated.

The columns headed **01** to **16** within the **Play List** manage the 16 MIDI channels:



BEGIN

+	Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
+	1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...													.	
+	2			35		12	14		SONG1	Shine on...													010.0	
+	3	24	22					57	SONG2	What do you want														
+	4		24	34		11	15		SONG3	Learning to fly														
+	5	12					17		SONG4	Whish you														
+	6		25	36	25	14	20	60	SONG5	Time														
+	7	10	20	32	24	11	10	56	SONG6	Money													008.0	
+	8	1				12		57	SONG7	War Dogs													012.0	
+	9	2	23	20					SONG8	High hopes														
+	10								BREAK	Amb														

END

You can Label each column (up to 4 characters) so that you can identify a device by its name rather than by channel number.

Tip

To define a program change:

1. Select the Page which will send the program change.
2. In the MIDI channel cell (column **01** to **16**), type in the value of the program change.

You can enter any value from **0** to **127**.

3. Confirm by pressing [**ENTER**].
4. When you have finished, remember to turn on MIDI **out** on the Main Mix display, see Page 381.

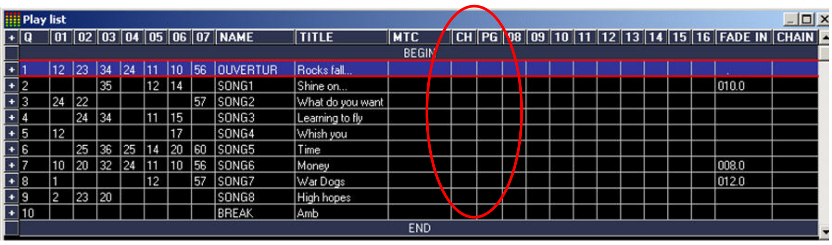
From here on, your configured program changes will play out when you change to the relevant Page.

You can also select and send MIDI Program changes from controls on the User Defined panel, see Page 322.

Tip

Receiving MIDI Program Changes

In the same way that the console can control external devices, external devices can control console Page changes. The columns headed **CH** and **PG** within the **Play List** define the MIDI channel and Program change value as follows:



Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
										BEGIN													
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...														
2			35		12	14		SONG1	Shine on...													010.0	
3	24	22					57	SONG2	What do you want														
4		24	34		11	15		SONG3	Learning to fly														
5	12					17		SONG4	Whish you														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Dogs													012.0	
9	2	23	20					SONG8	High hopes														
10								BREAK	Amb														
										END													

1. Select the Page which will be recalled by the MIDI program change.
2. In the **CH** cell, enter the MIDI channel number.

You can enter a value from **1** to **16**.

3. [**TAB**] across to the **PG** cell and enter the Program change value which will trigger the Page change.

You can enter any value from **0** to **127**.

4. Confirm by pressing [**ENTER**].
5. When you have finished, remember to turn on MIDI **in** on the Main Mix display, see Page 381.

From here on, when an external device sends the Program change on the specified channel, Eclipse will recall the configured Page.

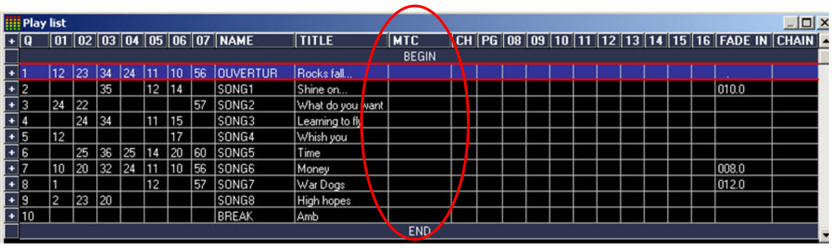
Note that if a crossfade is specified for the Page, then you can select whether the crossfade will be applied from the **Playlist Settings** window, see Page 380.

Note

Synchronising to MIDI Timecode (MTC)

When a device generating MIDI Time Code (MTC) is connected to the console, it is possible to synchronise Page changes to different MTC timecode addresses.

The column headed **MTC** within the **Play List** allows entry of the MIDI timecode value which will trigger each Page change:

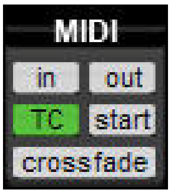


Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
										BEGIN													
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...														
2			35		12	14		SONG1	Shine on...													010.0	
3	24	22					57	SONG2	What do you want														
4		24	34		11	15		SONG3	Learning to fly														
5	12					17		SONG4	Whish you														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Dogs													012.0	
9	2	23	20					SONG8	High hopes														
10								BREAK	Amb														
										END													

First, let's deal with the MIDI timecode itself.

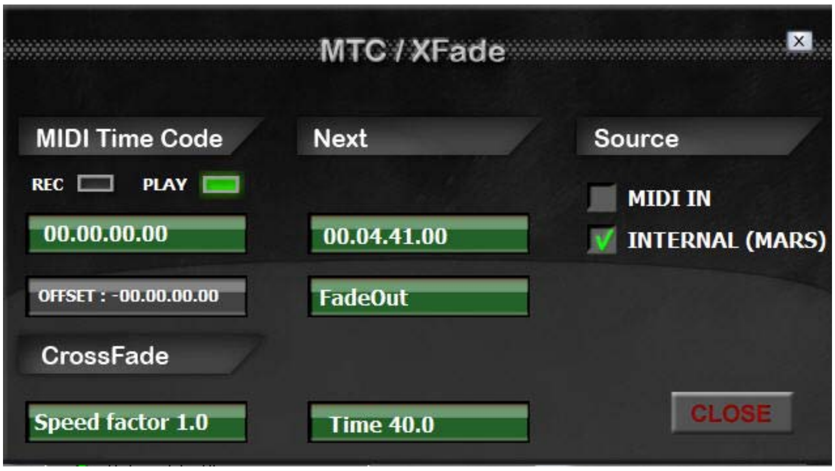
⏩ Displaying the MIDI Timecode

1. Click on the MIDI **TC** button, or select "**VIEW -> MTC/Xfade**" from the Main Menus.



A switch on the User Defined panel can also be assigned to this function, see Page 322.

*The **MTC/Xfade** window appears:*


MTC / XFade

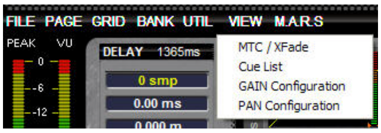
MIDI Time Code
REC ☐ PLAY 🟩
00.00.00.00
OFFSET : -00.00.00.00

Next
00.04.41.00
FadeOut

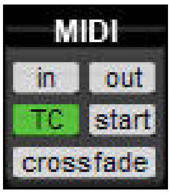
Source
☐ MIDI IN
☑ INTERNAL (MARS)

CrossFade
Speed factor 1.0
Time 40.0

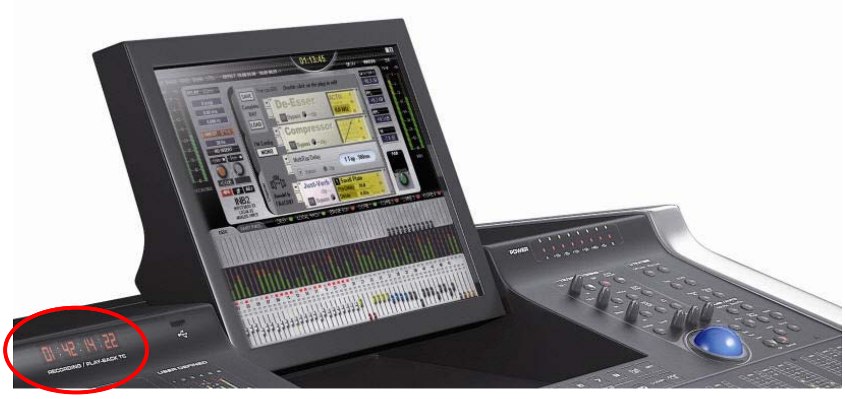
CLOSE



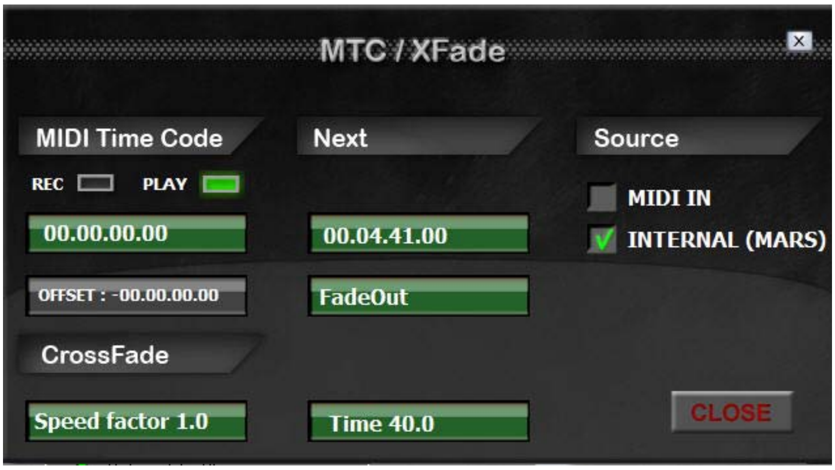
Under **Source**, select **MIDI IN** to select MIDI as the timecode source.



MTC is displayed on the built-in timecode display as soon as timecode appears at the console's **MIDI IN** connector and the MIDI **TC** button on the Main Mix display is enabled (green):



⏩ MTC Options



REC ☐ PLAY 🟩

00.00.00.00

OFFSET : -00.00.00.00

00.04.41.00

FadeOut

☐ MIDI IN

☑ INTERNAL (MARS)

Speed factor 1.0

Time 40.0

On the MTC/XFade window, the area below **MIDI Time Code** shows:

- **REC** and **PLAY** - the MIDI timecode mode. In our example, **PLAY** mode is selected.
- **MTC** – the incoming MIDI timecode with any offset applied. In our example, the MTC is **00.00.00.00**.
- **OFFSET** – this box can be used to enter an offset.

The area below **Next** shows details for the next Page change:

- **MTC** – displays the next MIDI timecode programmed to action a Page change.
- **Page Name** - displays the next Page change to take place. In our example, **FadeOut** is programmed.

⏩ Setting a MTC Offset

The timecode entered in the **OFFSET** box determines the absolute difference between the MTC value entering the console (generated by an external device) and the value displayed and used by Eclipse. The offset may be + or -:

1. To change the MTC offset:

- Left-click on the **OFFSET** box to decrease the offset.
- Right-click on the **OFFSET** box to increase the offset.

As you change the value, the MIDI timecode displayed on the console updates accordingly.

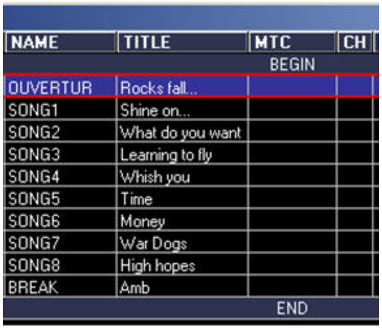
⏩ Setting the MTC Mode

The console can work in one of two MTC modes:

- **PLAY** - In this mode the MTC activates Page changes according to the MTC events defined within the Play List. Use this mode during the show to synchronise Page changes to MTC.
- **RECORD** – Use this mode during rehearsals to enter MTC values to the Play List on the fly. When active, the **REC** LED is red and the MTC box turns red.

⏩ Programming Page Changes

Having configured the MIDI timecode, you can now program the Page changes using the column headed **MTC** within the **Play List**. You can enter a timecode manually, by typing in a value, or on the fly, using the RECORD MTC Mode.



NAME	TITLE	MTC	CH
		BEGIN	
OUVERTUR	Rocks fall...		
SONG1	Shine on...		
SONG2	What do you want		
SONG3	Learning to fly		
SONG4	Whish you		
SONG5	Time		
SONG6	Money		
SONG7	War Dogs		
SONG8	High hopes		
BREAK	Amb		
		END	

To enter values manually:

1. Select the first Page to be synchronised.
2. In the **MTC** cell, type in the MTC value required.

Timecode entries must be made in the form HH:MM:SS:FF

- HH = hours, ranging from 00 to 23
- MM = minutes, ranging from 00 to 59
- SS = seconds, ranging from 00 to 59
- FF = frames, ranging from 00 to 29

3. Confirm by pressing [**ENTER**].
4. Repeat for each of the Pages to be programmed.

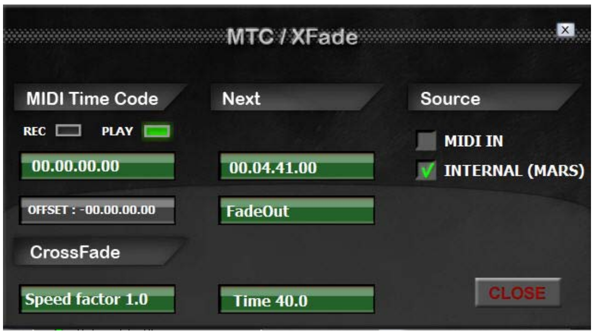
⏩ To enter MTC values on the fly:

1. Make all the necessary connections, and verify that you are receiving valid MTC by starting the MTC generator.

The MTC value displayed by Nova should be identical to that on the MTC generator.

- If the values are different, check to see if there is an offset in place.
- If the values are identical, everything is OK.

2. Stop the generator and start the timecode capture procedure as follows:
3. Select the Page preceding the first automatic change – e.g. **Song1**.
4. From the **MTC/Xfade** window, activate RECORD mode:



REC ☐ PLAY 🟩
00.00.00.00
00.04.41.00
☐ MIDI IN
☑ INTERNAL (MARS)
OFFSET : -00.00.00.00
FadeOut
Speed factor 1.0
Time 40.0

You can either click on the **REC** box, or press [**ALT**] + [**J**] on the console keyboard.

When RECORD mode is active, the MTC display turns red.

5. Start the MTC generator to begin the run through.
6. Press the **Next** button on the console when you want to change of Page to take place.

*The current Page updates (e.g. to **Song2**).*

7. Let the MTC run and press **Next** to capture timecode values for every Page change.

Tip

If you want to bypass a Page, or several Pages, use the **Goto** function rather than **Next**.

8. When the run through is complete, quit RECORD mode:

You can either click on the **PLAY** box, or press [**ALT**] + [**J**] on the console keyboard again.

*When **PLAY** mode is active, the MTC display turns green.*

If you look at the **Play List**, you have now entered a sequence of timecode values for each Page change. If you wish you can make manual adjustments by modifying the MTC value.

Note

Note that the MTC for a Page change must have a higher value than the previous Page and a lower value than the next Page!

⏩ Playing back Page changes to MTC

1. Check that MIDI **TC** is enabled on the Main Mix display, see Page 381.
2. Check that the MTC mode is **PLAY** in the **MTC/Xfade** window.
3. Run your MTC generator.

Each programmed Page changes occur automatically at the MTC value.

Crossfades

This function allows you to program crossfades such that when you change Pages, the console transitions smoothly from one setting to the next.

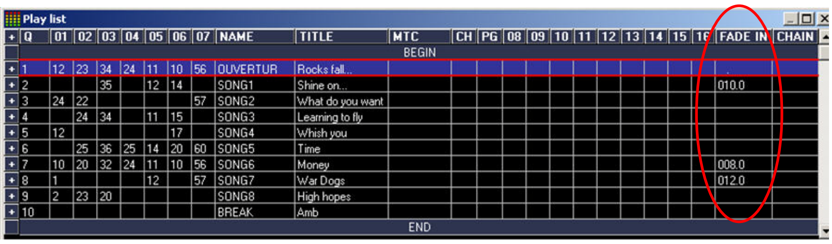
For each Page you can enter a fade in time, which will be actioned whenever the Page is recalled. This may be when you press **Next** on the console, or when a MIDI program change or MTC timecode address is received.

You can also choose to chain a number of Pages, allowing you to automate a complete sequence of Pages where the fade in times effectively morph between settings.

And, you can configure a Crossfade Fader or rotary control. This allows you to manually adjust pre-programmed fade times. For example, by pushing the fader upwards the crossfades play out faster, and by pushing the fader down the crossfades play out slower.

⏩ Crossfading Pages

The column headed **FADE IN** within the **Play List** allows entry of the fade in time for each Page:



Play list

Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
BEGIN																							
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...														
2			35		12	14		SONG1	Shine on...													010.0	
3	24	22					57	SONG2	What do you want														
4		24	34		11	15		SONG3	Learning to fly														
5	12					17		SONG4	Whish you														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Dogs													012.0	
9	2	23	20					SONG8	High hopes														
10								BREAK	Amb														
END																							

1. Select the Page you wish to crossfade into.
2. In the **FADE IN** cell, enter the fade in time.

You can enter a value between 0.1 and 999 seconds.

3. Confirm by pressing [**ENTER**].
4. Make sure that the **CHAIN** cell is blank.
5. Repeat for each of Page you wish to fade into.
6. When you have finished, turn on **crossfade** automation on the Main Mix display, see Page 381.

*From here on, when a next Page function is actioned, the **FADE IN** time will be applied. The **crossfade** automation button flashes while the fade is in progress.*

Note that the console performs its tasks in the following order:

Note

- A MIDI program change is transmitted (if the Page is programmed to send one).
- Audio parameters crossfade to their new value; changes are displayed in real time on the Main Mix display.

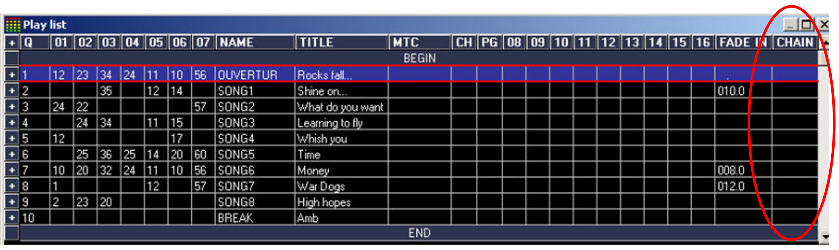
- At the end of the crossfade, the console's motorised faders update to their new position.

Also note that the start of the crossfade can be actioned by:

- Pressing the **Next** button.
- Pressing [**PAGE DOWN**] on the console keyboard.
- Receiving a MIDI program change or MTC timecode value which recalls the Page. Note that you can enable or disable crossfades in response to MIDI from the Playlist Settings window, see Page 380.

⏩ Chaining Pages

The column headed **CHAIN** within the **Play List** allows you to chain a number of Pages:



Play list

BEGIN

Q	01	02	03	04	05	06	07	NAME	TITLE	MTC	CH	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
1	12	23	34	24	11	10	56	OUVERTUR	Rocks fall...														
2			35		12	14		SONG1	Shine on...													010.0	
3	24	22					57	SONG2	What do you want														
4		24	34		11	15		SONG3	Learning to fly														
5	12					17		SONG4	Whish you														
6		25	36	25	14	20	60	SONG5	Time														
7	10	20	32	24	11	10	56	SONG6	Money													008.0	
8	1				12		57	SONG7	War Dogs													012.0	
9	2	23	20					SONG8	High hopes														
10								BREAK	Amb														

END

By entering **CHAIN** in this column you set the end action (following the crossfade) to automatically start the next transition.

So, for example, to chain three Pages:

1. Select the first Page and enter a **FADE IN** time.
2. Then double-click in **CHAIN** column.

*The word **CHAIN** should appear.*

3. Select the next Page and enter a **FADE IN** time and **CHAIN**.
4. Select the final Page and enter a **FADE IN** time. For this page, make sure the **CHAIN** column is blank.

A blank **CHAIN** column means that automation will stop at the end of the Page transition.

5. Remember to turn on **crossfade** automation on the Main Mix display, see Page 381.

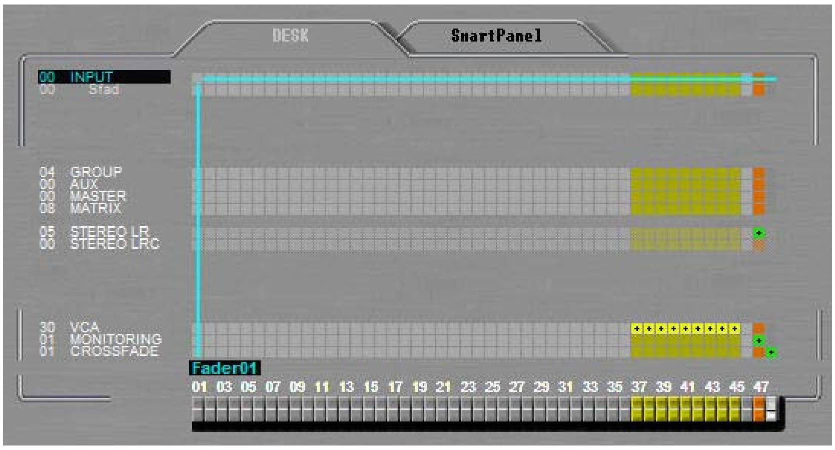
In our example, the playout sequence will run as follows:

- The console crossfades to the first Page settings.
- At the end of the fade in time, the next Page change automatically begins.
- At the end of the second Page crossfade, the final Page change automatically begins.
- Once the console has crossfaded to the final Page in the chain, automation stops.

⏩ The Crossfade Fader

By configuring a crossfade Fader you can manually adjust pre-programmed fade times. For example, by pushing the fader upwards the crossfades play out faster, and by pushing the fader down the crossfades play out slower.

1. First, you need to assign a CROSSFADE fader to a physical Fader strip from the Personal Console Builder, see Page 221:



Once configured, the Crossfade Fader strip is marked by a white fader ID.

2. The fader defaults to its halfway position.

At this position, the fader has no effect on the pre-programmed fade in times.

3. Raise the fader to make your crossfades occur faster. If you raise the fader fully open, then the fade in time is set to 0s and the Page change acts immediately.
4. Lower the fader to slow down fade times. If you close the fader, then the crossfade is paused and the console settings stay at their current values. This can be very useful if an artist is late getting on stage!

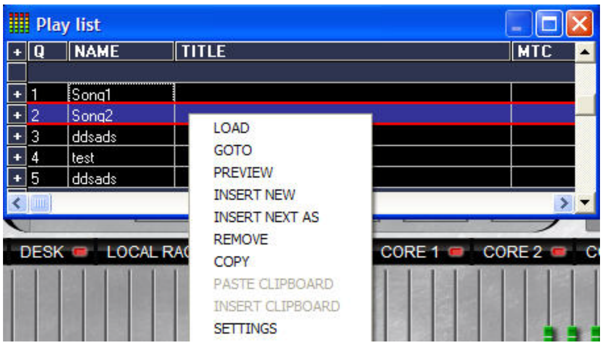
In each case, remember that parameter changes are displayed in real time on the Main Mix display. However, the console's motorized faders do not update until the end of the fade.

Tip

A rotary control on the User Defined panel can also be assigned to crossfade control, see Page 322.

Right-click Functions

When you right-click on a Page in the **Play List**, a drop-down menu provides access to a number of additional functions:



+	Q	NAME	TITLE	MTC
+	1	Song1		
+	2	Song2		
+	3	ddsads		
+	4	test		
+	5	ddsads		

Note that if the selected Page is the current Page it is shown with blue background (as above). If the selected Page is not the current Page it is shown with a white background.

- **LOAD** - loads the selected Page from hard disk.
- **GOTO** – loads the selected Page from RAM.
- **PREVIEW** - before the selected Page is loaded, the console switches to an Off-line mode. This allows you to preview, modify and save the selected Page without affecting the current mix and audio parameters.

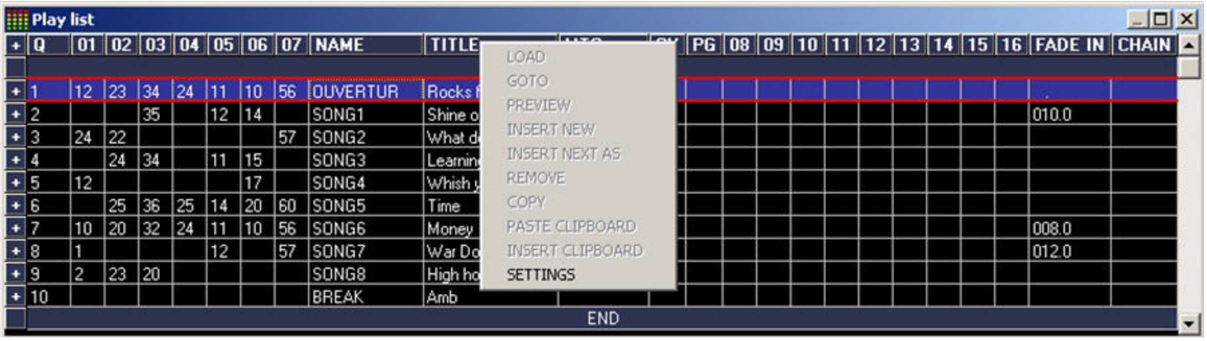
Note that **PREVIEW** differs slightly from the **OFFLINE** mode, described on Page 423, in the way in which it is cancelled. **PREVIEW** is automatically cancelled by pressing **Next** or **Prev**. You can also cancel **PREVIEW** without recalling a Page by pressing [**ALT**] + [**O**] on the keyboard.

- **INSERT NEW** – inserts a blank Page just after the current selection.
- **INSERT NEXT AS** – inserts a copy of the selected Page just after the current selection.
- **REMOVE** – removes the selected Page from the Play List (RAM). Note that the Page is not removed from the File on hard disk, and can be re-inserted later using the **EDIT** display.
- **COPY** – copies the selected Page to the Clipboard.
- **PASTE CLIPBOARD** - replaces the selected Page with the one copied to the Clipboard. This option is only available if the Clipboard contains a Page.
- **INSERT CLIPBOARD** – inserts the Page copied to the Clipboard after the current selection. This option is only available if the Clipboard contains a Page.
- **SETTINGS** – opens the **Playlist Settings** window, see Page 380.

Play List Settings

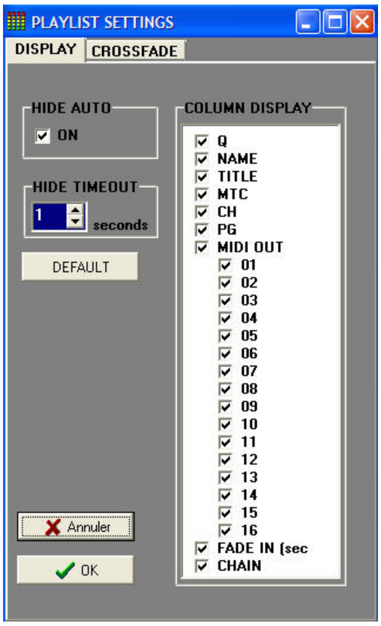
The **PlayList Settings** window allows you to configure the appearance and crossfade options for the **Play List**:

1. Select "**UTIL -> Playlist Settings**" from the main menus, or right-click anywhere within the **Play List** and select **SETTINGS** from the drop-down menu, to open the window:



Q	01	02	03	04	05	06	07	NAME	TITLE	PG	08	09	10	11	12	13	14	15	16	FADE IN	CHAIN
1	12	23	34	24	11	10	56	OUVERTUR	Rocks												
2			35		12	14		SONG1	Shine o											010.0	
3	24	22					57	SONG2	What d												
4		24	34		11	15		SONG3	Learnin												
5	12					17		SONG4	Whish y												
6		25	36	25	14	20	60	SONG5	Time												
7	10	20	32	24	11	10	56	SONG6	Money											008.0	
8	1				12		57	SONG7	War Do											012.0	
9	2	23	20					SONG8	High ho												
10								BREAK	Amb												

END



HIDE AUTO
☑ ON

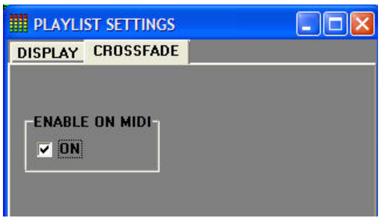
HIDE TIMEOUT
1 seconds

COLUMN DISPLAY
☑ Q
☑ NAME
☑ TITLE
☑ MTC
☑ CH
☑ PG
☑ MIDI OUT
  ☑ 01
  ☑ 02
  ☑ 03
  ☑ 04
  ☑ 05
  ☑ 06
  ☑ 07
  ☑ 08
  ☑ 09
  ☑ 10
  ☑ 11
  ☑ 12
  ☑ 13
  ☑ 14
  ☑ 15
  ☑ 16
☑ FADE IN (sec
☑ CHAIN

2. Select **DISPLAY** to adjust the appearance options for the **Play List**:

- **HIDE AUTO** – activate this option to automatically hide the **Play List** window whenever the user changes a mixing parameter masked by the window. For example, if the **Play List** is covering EQ parameters on the Main Mix display, when you change an EQ value, the window will disappear for set period of time. Enter the time period in the **HIDE TIMEOUT** field.
- **DEFAULT** – resets the **Play List** appearance to a default configuration.
- **COLUMN DISPLAY** – shows or hides columns within the **Play List**. You can use these options to simplify the **Play List** window, see Page 379.

3. Press **OK** to load your changes.

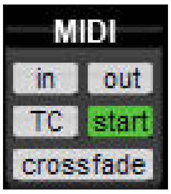


ENABLE ON MIDI
☑ ON

4. Select **CROSSFADE** at the top of the window to adjust crossfade options:

- **ENABLE ON MIDI** – tick this checkbox if you wish crossfades to be applied when Pages are changed from an external device (via MIDI program changes or MTC).

Automation Enable Buttons



The MIDI buttons on the right of the Main Mix display allow you to enable or disable automation functions defined within the **Play List**. In each case, the buttons are green when enabled:

- **in** – when enabled, Page changes will be actioned from MIDI program changes received at the **MIDI IN** connector at the rear of the console.
- **out** – when enabled, MIDI program changes are output to the **MIDI OUT** connector at the rear of the console.
- **TC** - when enabled, Page changes will be actioned from MIDI timecode (MTC) received at the **MIDI IN** connector.
- **start** - when enabled, fader starts programmed from the **FADER START** display will send MIDI Note On and Note off messages to the **MIDI OUT** connector.
- **crossfade** – enable this option to activate crossfade automation.

⏩ Keyboard Shortcuts

The **in**, **out** and **crossfade** automation enable buttons can also be actioned from the console keyboard:

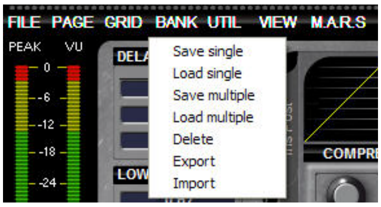
- **in** – press [**ALT**] + [**X**].
- **out** – press [**ALT**] + [**Y**].
- **crossfade** – press [**ALT**] + [**D**].

Or from switches on the User Defined panel, see Page 322.

Processing Libraries

Processing libraries can be used to save and load the settings for a particular channel independent of the current File and Page. For example, if you have created the ultimate Kick Drum EQ and Compression, it would be nice to be able to load it to any channel in any future show.

Each library saves all the settings for the selected channel (input or output). When you load back, you can choose which parameters you wish to load.



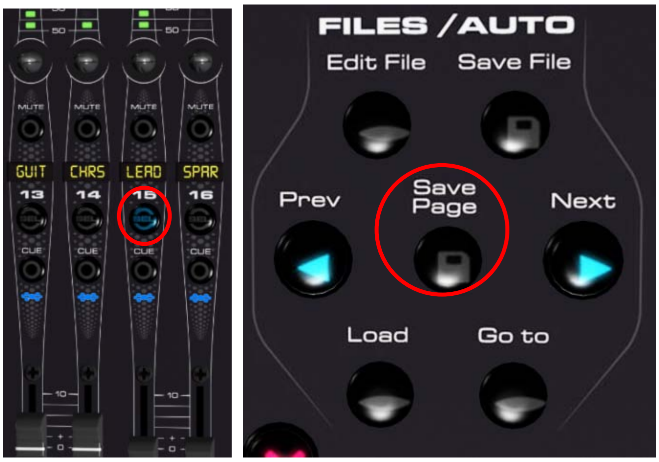
Libraries are saved onto the Nova hard disk and can be exported to USB for transfer to another console. The **BANK** main menu accesses all Processing Library functions.

⏩ Bank -> Save single

To save a channel's settings into a processing library:

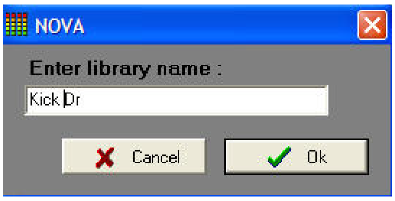
1. Press **SEL** on the channel you wish the save.
2. Select "**Bank -> Save single**" or use the following shortcut:

- Press and hold the **SEL** button on the channel. Then press **Save Page** on the FILES/AUTO panel:



A switch on the User Defined panel can also be assigned to this function, see Page 322.

You will be asked to enter a name for the library:



Enter library name : Kick Dr

3. Type in a name up to 8 characters.
4. Press **OK** to confirm the save.

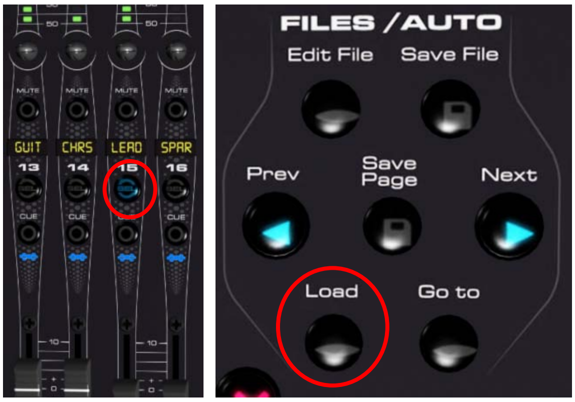
All processing settings on the channel are saved.

⏩ Bank -> Load single

To load settings from a processing library back to a channel:

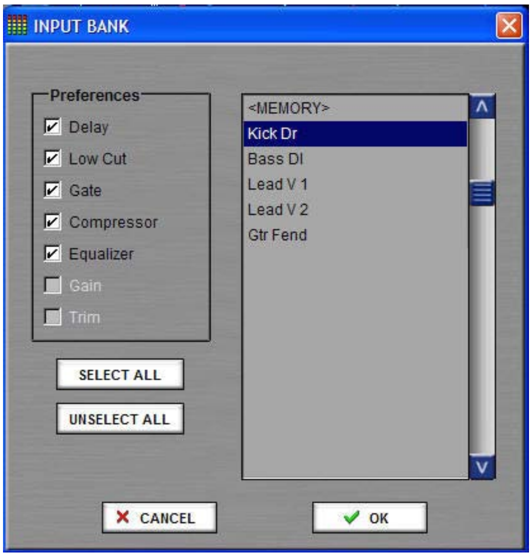
1. Press **SEL** on the channel you wish to load to.
2. Select "**Bank -> Load single**" or use the following shortcut:

- Press and hold the **SEL** button on the channel. Then press **Load** on the FILES/AUTO panel:



A switch on the User Defined panel can also be assigned to this function, see Page 322.

The following pop-up appears:



Preferences
☑ Delay
☑ Low Cut
☑ Gate
☑ Compressor
☑ Equalizer
☐ Gain
☐ Trim

<MEMORY>
Kick Dr
Bass DI
Lead V 1
Lead V 2
Gtr Fend

3. Select the library file you wish to load – in our example, **Kick Dr**.
4. Under **Preferences** tick the settings you wish to load.

Note that you can only load input channel libraries to inputs, and output channel libraries to outputs.

Note

5. Then press **OK**.

The ticked parameters are loaded from the library file to the selected channel.

⏩ Bank -> Save multiple

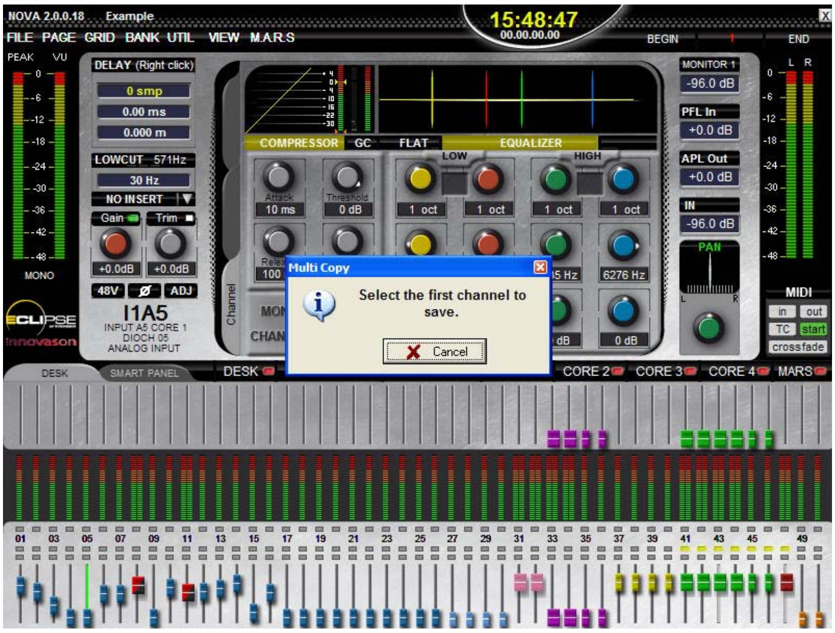
This operation saves settings from a range of channels. For example, if you wish to save the complete drum mix as a library.

Note

Note that channels must be consecutive and of the same type – e.g. all input channels.

1. Select “**Bank -> Save multiple**”.

*The **Multi Copy** pop-up window appears prompting you to select the first channel to save, and all the **SEL** buttons on the Fader strips and Smart Panel controllers flash:*



Multi Copy

Select the first channel to save.

2. Press the **SEL** button on the first fader (or Smart Panel controller) you wish to save – e.g. on your Kick drum fader.

*The **Multi Copy** window now asks for the last channel you wish to save:*

3. Press the **SEL** button on the last fader (or Smart Panel controller) you wish to save – e.g. on the OverHead Right fader.

You will be asked to enter a name for the library.

4. Type in a name, up to 8 characters.
5. Press **OK** to confirm the save.

All processing settings across the range of channels are saved.

⏩ Bank -> Load multiple

This operation allows you to load either a folder of settings (saved by Save multiple), or multiple single processing libraries.

Note

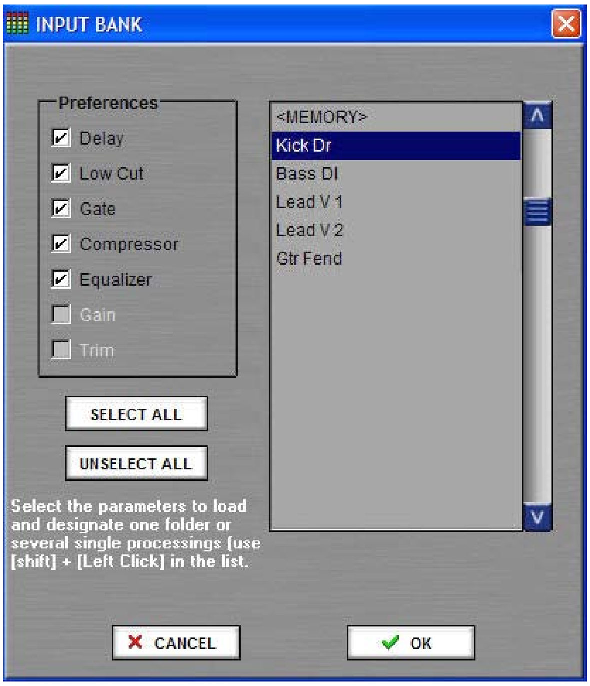
Note that channels must be consecutive and of the same type – e.g. all input channels.

1. Press **SEL** on the first channel of the range you wish to load to.

Settings will be loaded from left to right starting with this channel number.

2. Select “**Bank -> Load multiple**”.

The following pop-up appears:



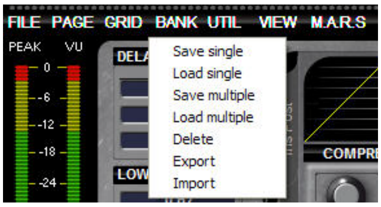
Preferences
☑ Delay
☑ Low Cut
☑ Gate
☑ Compressor
☑ Equalizer
☐ Gain
☐ Trim

Select the parameters to load and designate one folder or several single processings (use [shift] + [Left Click] in the list.

3. Select the library file you wish to load – you can select a folder (as saved using Save multiple) or several single processing libraries (press [**Shift**] and left-click on each file.)
4. Under **Preferences** tick the settings you wish to load.
5. Then press **OK**.

The ticked parameters are loaded to the channel range.

Bank -> Delete



Select “**Bank -> Delete**” and you will be presented with a pop-up which shows all Library files on the hard disk.

Select the Library you wish to delete and press **OK**.

Bank -> Import and Export

Select “**Bank -> Export**” to export a Library from hard disk to USB.

Select “**Bank -> Import**” to import a Library from USB to the Nova hard disk.

In both cases, you are presented with File Explorer windows which can be used in a similar manner to importing and exporting Files, see Page 352.

Processing Libraries are stored as file type ***.lib**.

Personal Mixes

A “Personal Mix” saves the send levels, panning and routing for a particular Aux. This allows you to save a different monitor mix for each musician working on the show. For example, if you have different drummers who work on different nights of the week, you can save a Personal Mix for each performer.

Each Personal Mix stores the send levels, pan position (if panning is independent) and routing for a specific Aux. Personal Mixes are saved in the current File. You can load a Personal Mix to any Aux; the Aux mix is updated for all Pages.

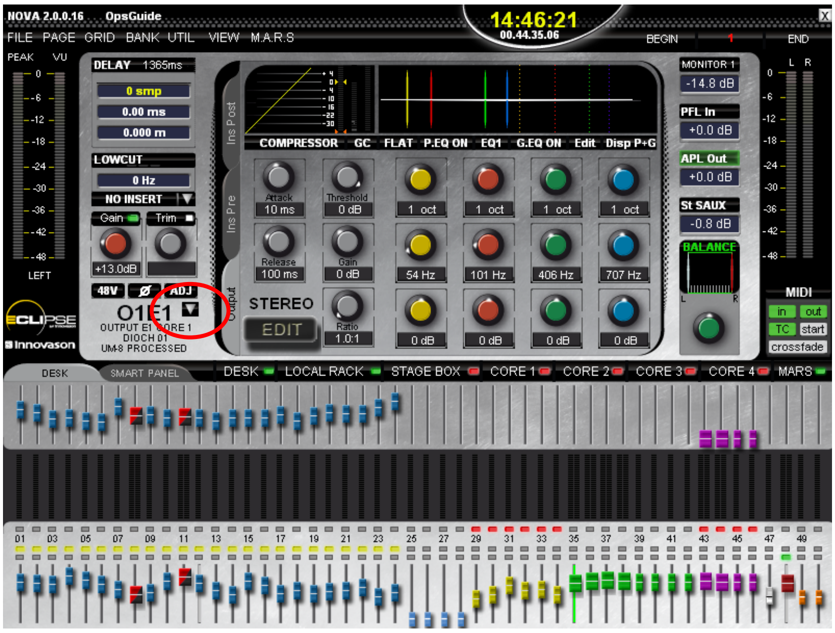
Saving a Personal Mix

To save an Aux mix to a Personal Mix memory:

1. Select the Aux you wish to save by pressing **SEL** on the Aux fader or Smart Panel controller (green ID).

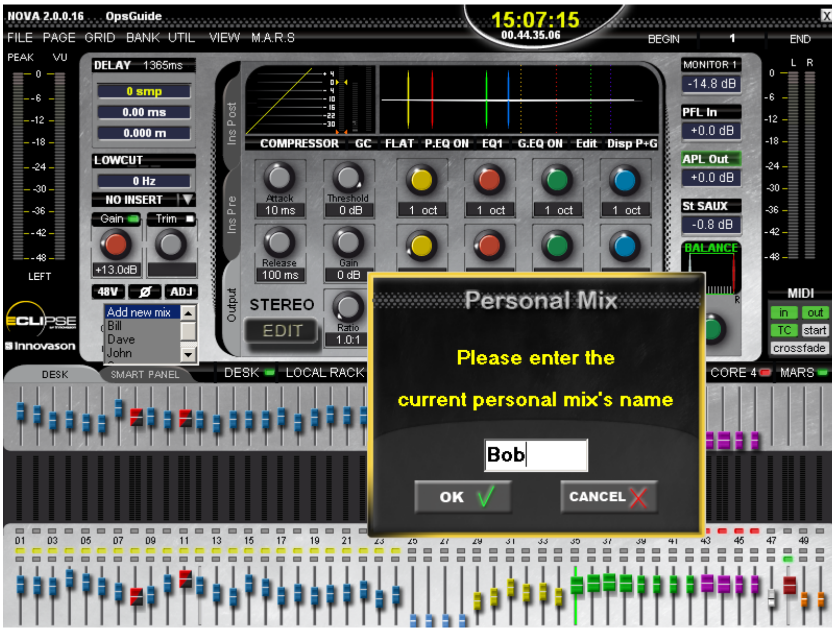
*The **SEL** button and Label should be flashing.*

2. On the Main Mix display, select the arrow to the right of the channel label to access the list of Personal Mixes stored in the current File:



3. Select **Add new mix** from the list.

A pop-up appears prompting you to enter a name for the ***current*** *mix:*



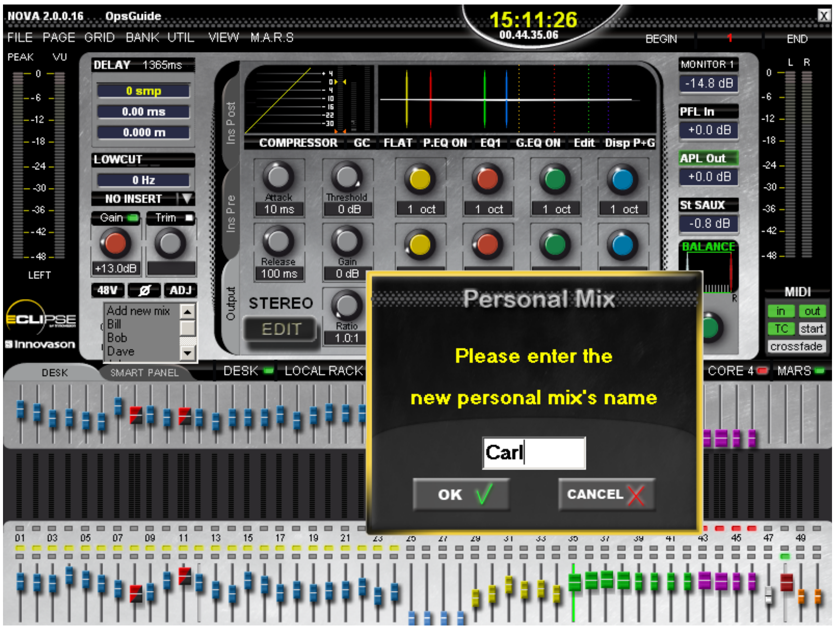
Personal Mix

Please enter the current personal mix's name

Bob

4. Type in a name and press **OK** to confirm.

The current Aux send mix is stored as a Personal Mix under the name Bob. Another pop-up now opens prompting you to enter a name for the ***new*** *Personal Mix:*



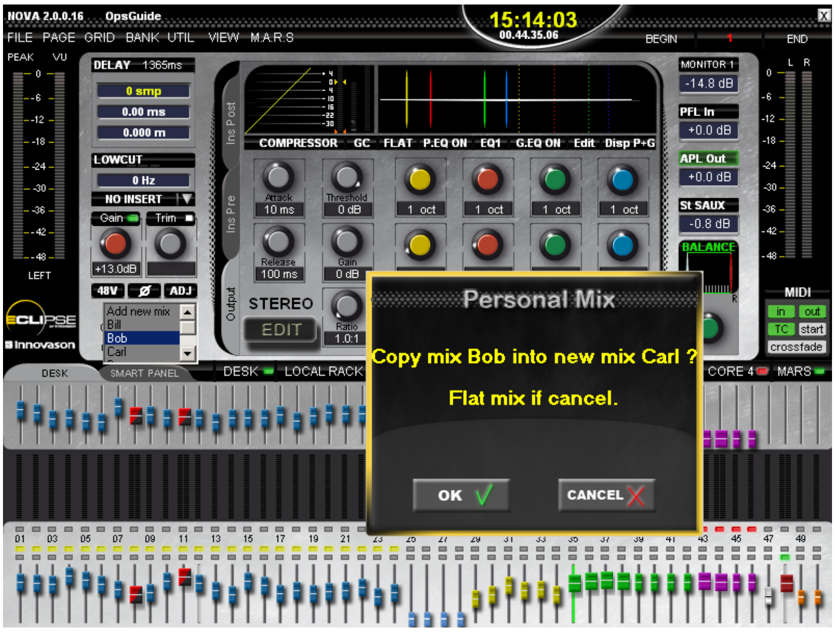
Personal Mix

Please enter the new personal mix's name

Carl

5. Type in a name for the new mix you are about to create and press **OK** to confirm.

You are now asked whether you wish to copy the settings from Bob's Personal Mix to the new mix Carl.



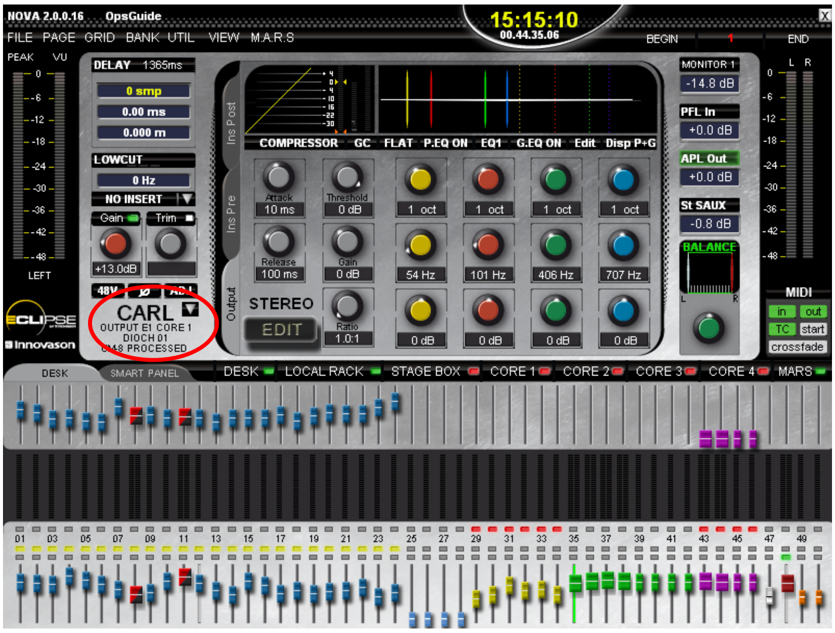
Copy mix Bob into new mix Carl ?

Flat mix if cancel.

6. Select either **OK** or **Cancel**:

- **OK** – Use this option if you want to use the current send levels, panning and routing as a starting point for the new mix.
- **Cancel** – Use this option to create a new mix from scratch. The system resets the Aux send levels to off, Aux send pan position to Dependent (follows the main channel pan) and routing assignments to off.

Having made your decision, the new Personal Mix is active, and the name appears in place of the Aux channel label – in our example, the Personal Mix named Carl:



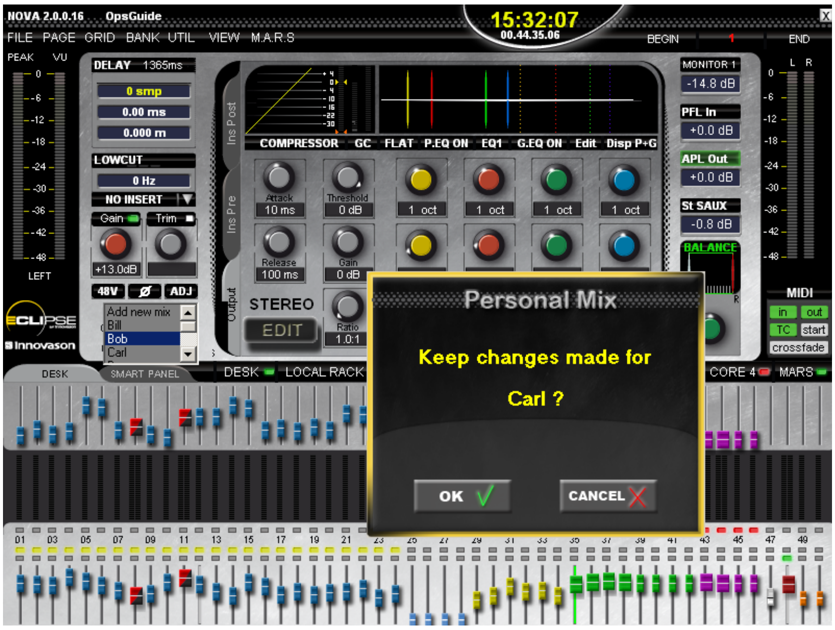
7. You can now modify the Aux send levels, panning (if the aux is stereo) and routing assignments.

Any changes automatically update the current Personal Mix in RAM. These changes are applied to the selected Aux throughout all Pages.

8. To save the changes permanently, save the File.

Note

Note that if you try to load a different Personal Mix without saving the File, then you will be prompted to save your changes first:



Personal Mix

Keep changes made for Carl ?

Loading a Personal Mix

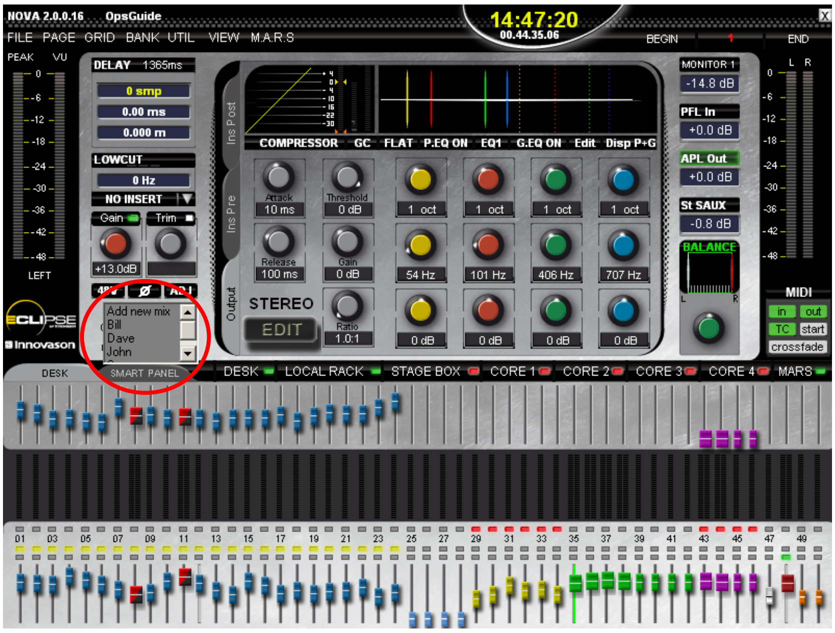
Having saved and named some Personal Mixes, each can be loaded to any Aux within any Page of the current File.

To load a Personal Mix:

1. Select the Aux you wish to load to pressing **SEL** on the Aux fader or Smart Panel controller (green ID).

*The **SEL** button and Label should be flashing:*

2. On the Main Mix display, select the arrow to the right of the channel label to access the list of Personal Mixes stored in the current File:



3. Select a mix from the list – for example, Dave.

The mix is loaded and the Aux send levels, panning (if the selected Aux is stereo) and routing assignments update accordingly.

Note that if you have changed the current Personal Mix without saving the File, then you will be asked to save these changes before loading the new Personal Mix.

Note

Personal Mix Import and Export

Personal Mixes are stored as part of a File and therefore can be imported and exported using **File** -> **Import** and **File** -> **Export**, see Page 352.

Chapter 8: Utilities & Preferences

Introduction

In this chapter we will cover the console's UTILITIES panels, and operations performed from Nova displays which have not been described elsewhere in this manual:

- **UTILITIES** (above EQ):

  - **Flat (Parameter Reset)** – see Page 393.
  - **Copy Paste** – see Page 394.
  - **Over Ram** – see Page 399.
  - **Relax (Automation Isolate)** – see Page 404.
  - **Rqst** – see Page 406.
  - **Pre/Pan** – opens the **PAN** display, Page 164.
  - **Link Cards** – see Page 421.

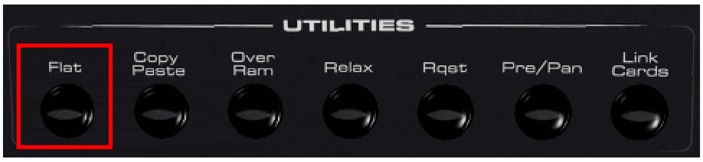
- **UTILITIES** (above FILES/AUTO):
  - **Offline** – see Page 423.
  - **Play List** - opens the **Play List**, Page 364.
  - **Test Tone (Oscillator)** - see Page 425.
  - **D I/O** - opens **PATCH DIRECT**, see Page 256.
  - **Patch In** - opens **PATCH INPUT**, see Page 231.
  - **Patch Out** - opens **PATCH OUTPUT**, Page 247.
- **Nova displays**:
  - **Link Channel** – see Page 410.
  - **Fader Start** – see Page 427.
  - **General Preferences** – see Page 428.
  - **Lock (Password Protection)** – see Page 432.
  - **Help (Keyboard Shortcuts)** – see Page 434.
  - **About** - see Page 435.
  - **Quit** (Console Shutdown) – see Page 436.

All other Nova displays are covered elsewhere in this manual. Use the Index on Page 523 to find other topics.

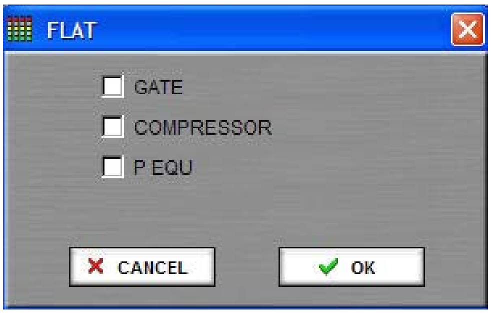
FLAT (Parameter Reset)

This button allows you to reset individual channel parameters (Gate, Compressor and EQ) to their default values.

1. Press **SEL** on the channel you wish to reset.
2. Press **Flat** on the UTILITIES panel:



The following window appears:



3. Select the parameters you wish to reset:

- You can either click on the checkboxes.
- Or, press the **Gate ON**, **Compressor ON**, **EQ ON** buttons on the console to tick or untick the checkboxes.

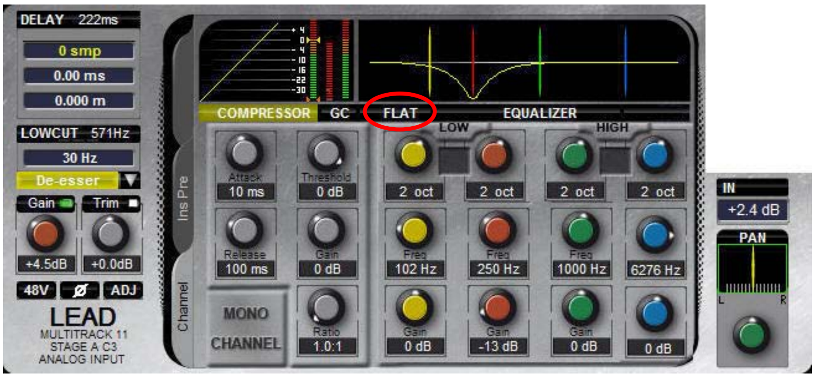
4. When you are ready, press **OK** to confirm the operation.

The chosen parameters are reset to their default values on the selected channel.

Note that the example above shows an input channel. If you select an output channel (UM8 output), then you can reset the Parametric EQ and Graphic EQ independently.

Note that you cannot undo the reset, other than to reload a saved Page from File.

If you are working offline, you can select the **FLAT** window from the Main Mix display:



Copy and Paste

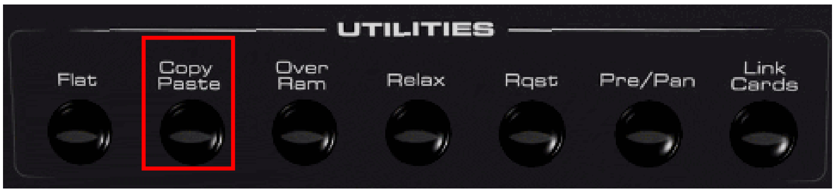
This button allows you to copy and paste channel settings. It has two modes of operation:

- **Single Channel Copy** – copies settings from a single channel.
- **Multiple Channel Copy** – copies settings from a range of channels.

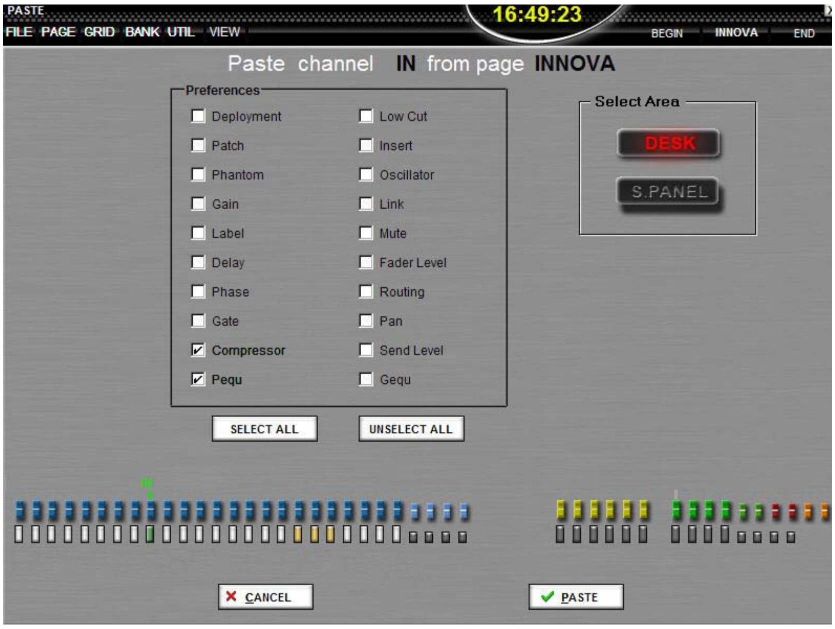
Single Channel Copy

This operation copies selected settings from a single channel. You can paste the settings to one or more channels across the console:

1. Press **SEL** on the channel you wish to copy.
2. Press **Copy/Paste** on the UTILITIES panel:



Settings from the selected channel are copied into a temporary clipboard, and the ***Paste*** *display opens:*



Paste channel IN from page INNOVA

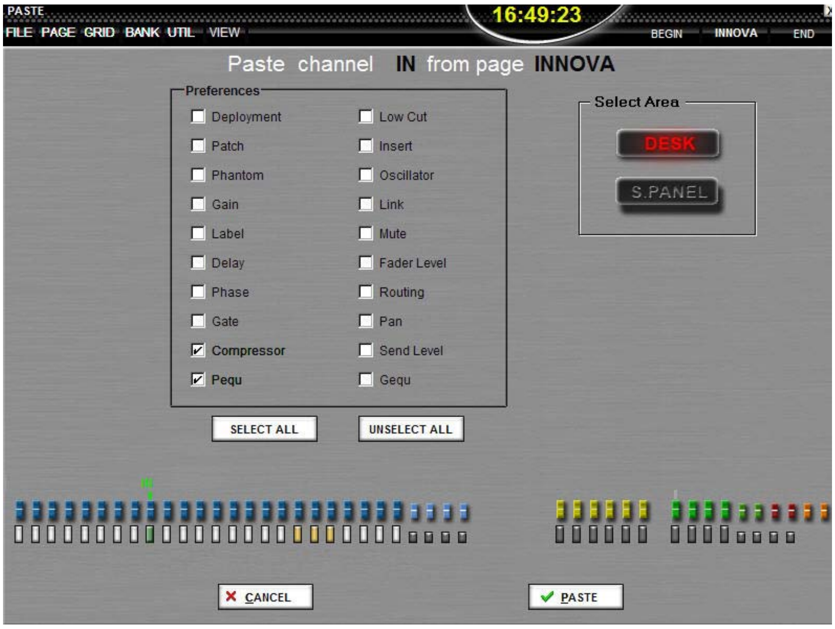
Preferences

☐ Deployment	☐ Low Cut
☐ Patch	☐ Insert
☐ Phantom	☐ Oscillator
☐ Gain	☐ Link
☐ Label	☐ Mute
☐ Delay	☐ Fader Level
☐ Phase	☐ Routing
☐ Gate	☐ Pan
☑ Compressor	☐ Send Level
☑ Pequ	☐ Gequ

Select Area

The top of the display shows that we have copied an **IN** channel from the Page named **INNOVA**; the copied channel is marked with a green box below its fader at the bottom of the display.

3. In the **Preferences** area, select the parameters you wish to paste – in our example, Compressor and Parametric EQ:



Paste channel IN from page INNOVA

Preferences

☐ Deployment
☐ Patch
☐ Phantom
☐ Gain
☐ Label
☐ Delay
☐ Phase
☐ Gate
☑ Compressor
☑ Pequ
☐ Low Cut
☐ Insert
☐ Oscillator
☐ Link
☐ Mute
☐ Fader Level
☐ Routing
☐ Pan
☐ Send Level
☐ Gequ

You can use **SELECT ALL** or **UNSELECT ALL** to tick or untick all options.

4. Now select the channels to paste to by pressing their **SEL** buttons.

The selected channel is marked with a yellow box below its fader.

You can select multiple channels, and you can paste to Fader strips or Smart Panel controllers (**DESK** or **S.PANEL**).

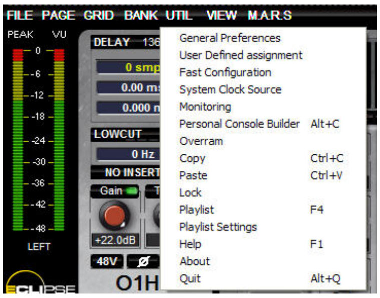
5. When you are ready, press **OK** to perform the **PASTE**.

*The copied parameters are pasted to the selected channels, and the **PASTE** display closes.*

Note that you cannot undo the paste, other than to reload a saved Page.

If you are working offline, you can select **Copy** and **Paste** from the **UTIL** main menu:

Note



Or, use the console keyboard:

- Press [**Ctrl**] + [**C**] to copy the selected channel.
- Press [**Ctrl**] + [**P**] to open the **PASTE** display.

Multiple Channel Copy

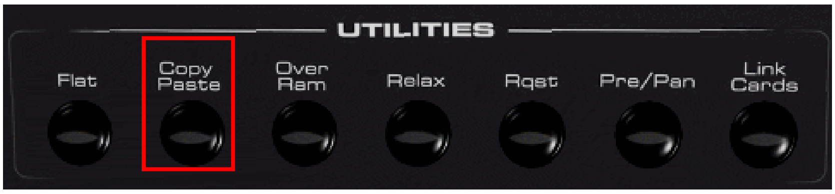
This operation copies settings from a range of channels, allowing you to paste them to a different range.

For example, if the same drummer plays in more than one song and you wish to vary the channel layout between songs, you can copy the drum mix to a different set of channels within each Page.

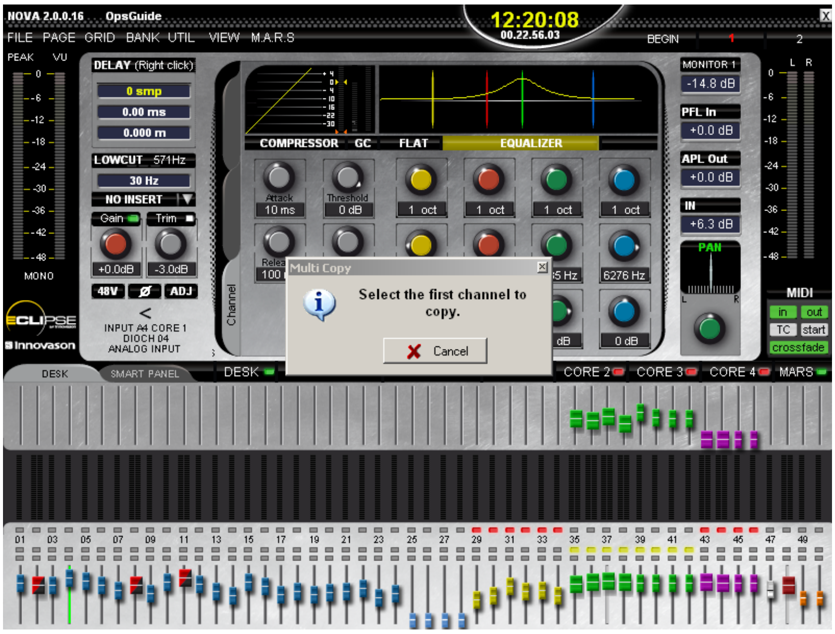
Note

Note that the source and destination channels must be consecutive and of the same type – e.g. all input channels.

1. Press and hold the **Copy/Paste** button on the UTILITIES panel for more than 2 seconds:



*The **Multi Copy** pop-up window appears prompting you to select the first channel to copy, and all the **SEL** buttons on the Fader strips and Smart Panel controllers flash:*

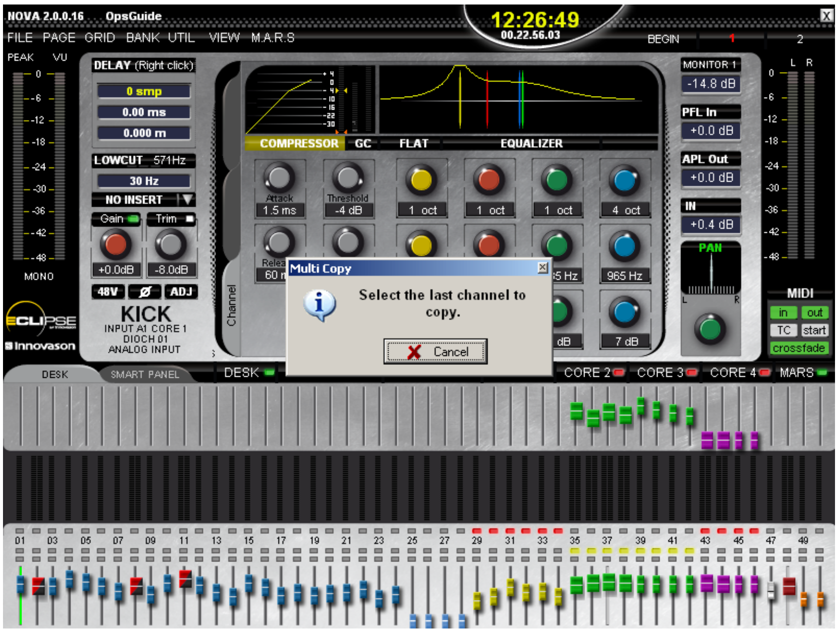


Multi Copy

Select the first channel to copy.

2. Press the **SEL** button on the first fader (or Smart Panel controller) you wish to copy – e.g. on your Kick drum fader.

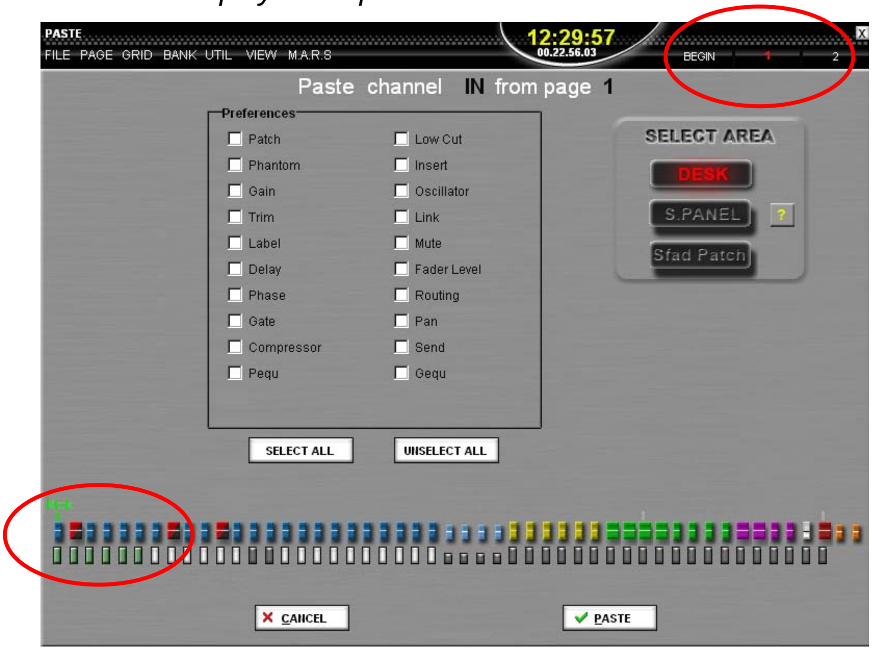
*The **Multi Copy** window now asks for the last channel you wish to copy:*



Select the last channel to copy.

3. Press the **SEL** button on the last fader (or Smart Panel controller) you wish to copy – e.g. on the OverHead Right fader.

*The **Paste** display now opens:*



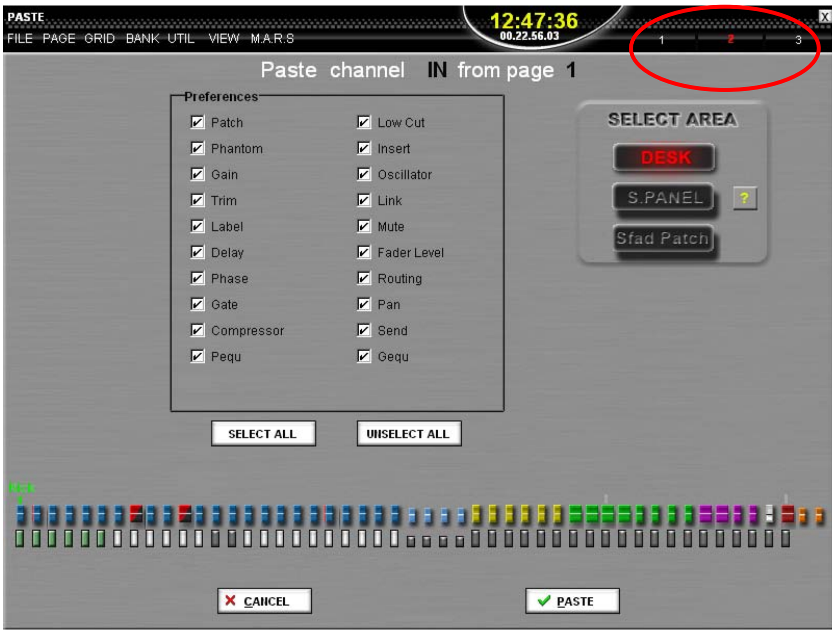
Paste channel IN from page 1

The range of channels which you are copying is indicated by the green markers below the faders at the bottom of the display – in our example, Faders 1 to 6.

The current Page is highlighted in red at the top right – in our example, Page 1.

4. If you wish to paste into a different Page, then load the Page now using the **Next** or **Prev** Page buttons.

The current Page updates – in our example to Page 2:



Paste channel IN from page 1

Preferences

☑ Patch
☑ Phantom
☑ Gain
☑ Trim
☑ Label
☑ Delay
☑ Phase
☑ Gate
☑ Compressor
☑ Pequ
☑ Low Cut
☑ Insert
☑ Oscillator
☑ Link
☑ Mute
☑ Fader Level
☑ Routing
☑ Pan
☑ Send
☑ Gequ

5. In the **Preferences** area, select the parameters you wish to paste – in our example, all parameters.
6. Then press a **SEL** button on the console to determine the first channel you wish to paste to – in our example, Fader 19:

*The destination channel range is indicated on the console by flashing **SE**L buttons.*

You can change the starting channel by pressing a different **SEL** button. The destination range must contain consecutive channels of the same type – in our example, input channels.

7. When you are ready, press **OK** to perform the **PASTE**.

*The selected parameters for the copied channel range (shown in green on the **Paste** display) are pasted to the destination channel range (indicated by flashing **SEL** buttons) on the console. An INFO window appears confirming the paste operation and the **Paste** display closes.*

Note

At any stage during the operation, you can press **CANCEL** to exit Multiple Copy mode without performing a copy and paste.

Over Ram

This function writes parameters from a selected channel or channels into other Pages in RAM. Thereby allowing you to modify settings for the Pages which will play out during a show.

For example, if at the beginning of a show you realise that an instrument is too low in the mix, you can raise its level and then write this new fader level into all Pages in RAM. This function overwrites settings in RAM, therefore it is called Over Ram.

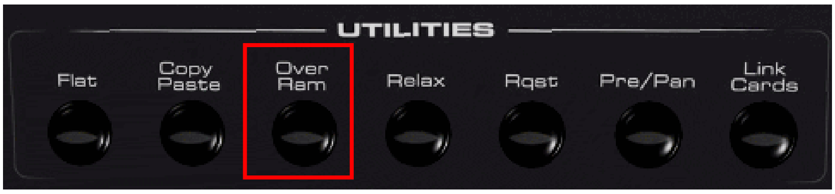
Note that parameters are updated according to their absolute values; you cannot trim an existing value.

Note

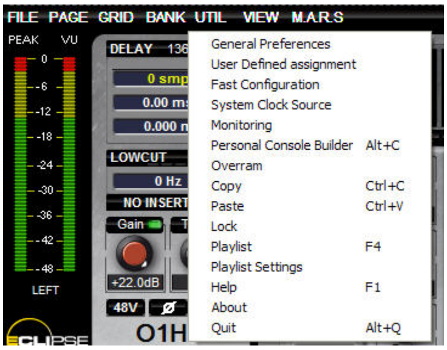
Note that the **Over Ram** display acts only on channels of the console. If you wish to Over Ram parameters for a source or destination which is not assigned to the surface, such as a talkback microphone, then use OVERRAM from the **PATCH DIRECT** grid, see Page 258.

ECLIPSE	**Over Ram** **(UTILITIES)**
🖱	**“UTIL -> Over Ram”**
⌨	**n/a**

1. Press **Over Ram** on the UTILITIES panel to open the **OVERRAM** display:

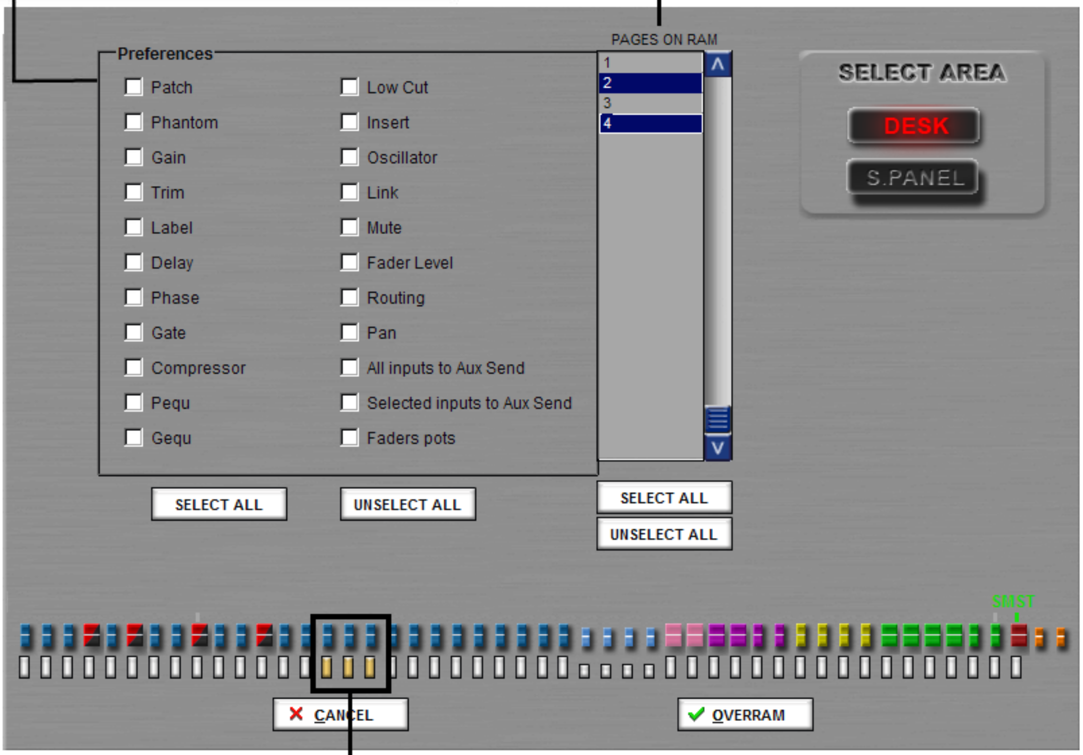


If you are working offline, you can select the **OVERRAM** display from the **UTIL** main menu:



This area allows you to choose which parameters, on the selected channels, OverRam will influence

The update can be made on one page (left-click on the trackball), several pages (right-click), or all pages (**SELECT ALL**)



The channels selected for OverRam are indicated in yellow

2. Select the channels which you wish to Over Ram by pressing their **SEL** buttons.

You can select Fader strips or Smart Panel controllers (**DESK** or **S.PANEL**).

3. Select the parameters you wish to Over Ram from the **Preferences** area.

Note

Note that the **All Inputs to Aux Send** and **Selected inputs to Aux Send** options are a special case, see next page.

4. Select the Pages you wish to Over Ram from the list on the right.
5. When you are ready, press **OK** to perform the operation.

The chosen parameters for the selected channel(s) are written into the selected Pages in RAM.

Parameters are only written to Pages in RAM, and will not affect Pages saved to a File on hard disk. If you wish to keep your Over Ram changes for another day, save the File to write the RAM Pages to hard disk, see Page 347.

Over Ram for Aux Sends

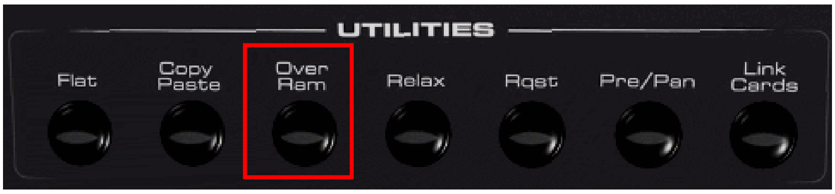
For Aux mixes, you have two choices from the **Preferences** area:

- **All Inputs to Aux Send** – allows you to Over Ram all sends to an Aux (or Auxes) in one operation.
- **Selected Inputs to Aux Send** – allows you to Over Ram selected sends to an Aux (or Auxes). For example, if you just want to change the level of one instrument to a monitor feed.

⏩ All Inputs to Aux Send

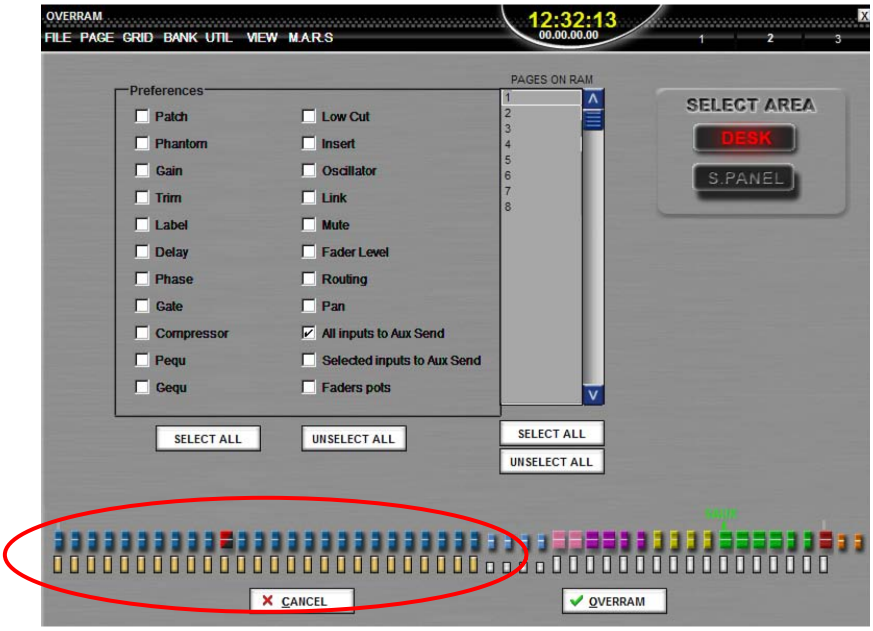
To Over Ram all sends to an Aux:

1. Press **Over Ram** on the UTILITIES panel to open the **OVERRAM** display:



2. Select the **All Inputs to Aux Send** option from the **Preferences** area.

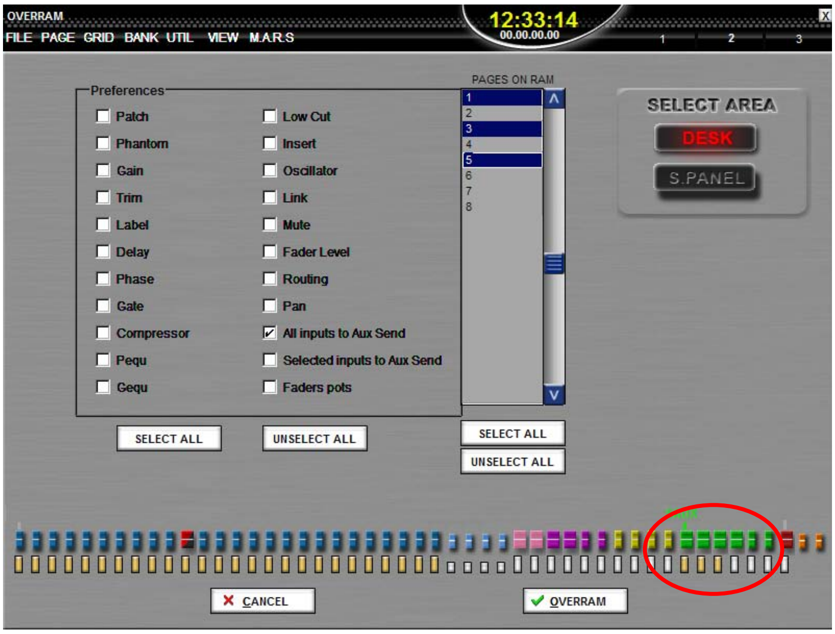
This automatically selects all input channels (shown in yellow at the bottom of the display):



Preferences

- ☐ Patch
- ☐ Phantom
- ☐ Gain
- ☐ Trim
- ☐ Label
- ☐ Delay
- ☐ Phase
- ☐ Gate
- ☐ Compressor
- ☐ Pequ
- ☐ Gequ
- ☐ Low Cut
- ☐ Insert
- ☐ Oscillator
- ☐ Link
- ☐ Mute
- ☐ Fader Level
- ☐ Routing
- ☐ Pan
- ☑ All inputs to Aux Send
- ☐ Selected inputs to Aux Send
- ☐ Faders pots

3. Now select the Auxes you wish to Over Ram by pressing their **SEL** buttons. You can select multiple Auxes if you wish:



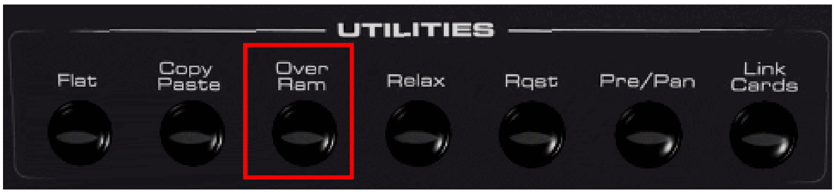
4. And select the Pages you wish to Over Ram from the list on the right.
5. When you are ready, press **OK** to perform the operation.

The selected Aux send mixes (from all input channels) are written into the selected Pages in RAM.

⏩ Selected Inputs to Aux Send

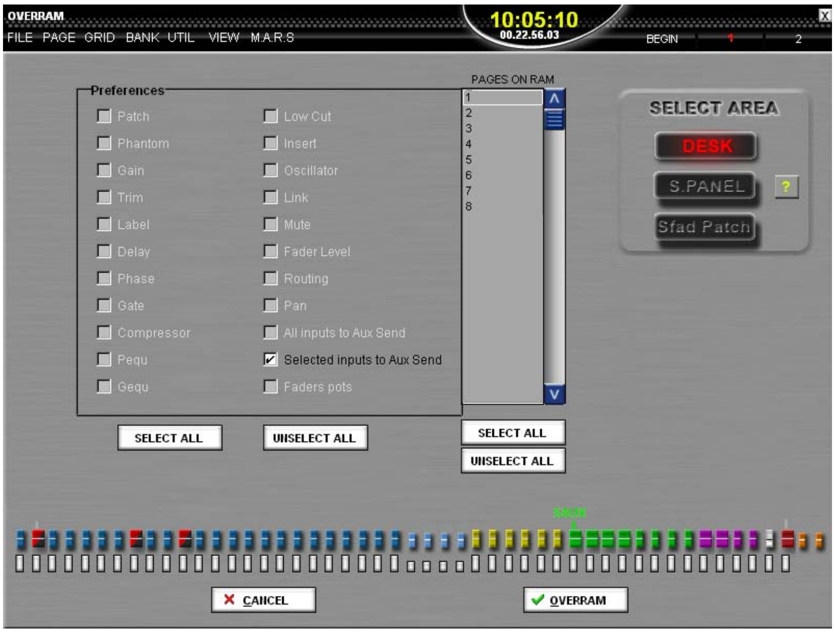
To Over Ram selected sends to an Aux:

1. Press **Over Ram** on the UTILITIES panel to open the **OVERRAM** display:



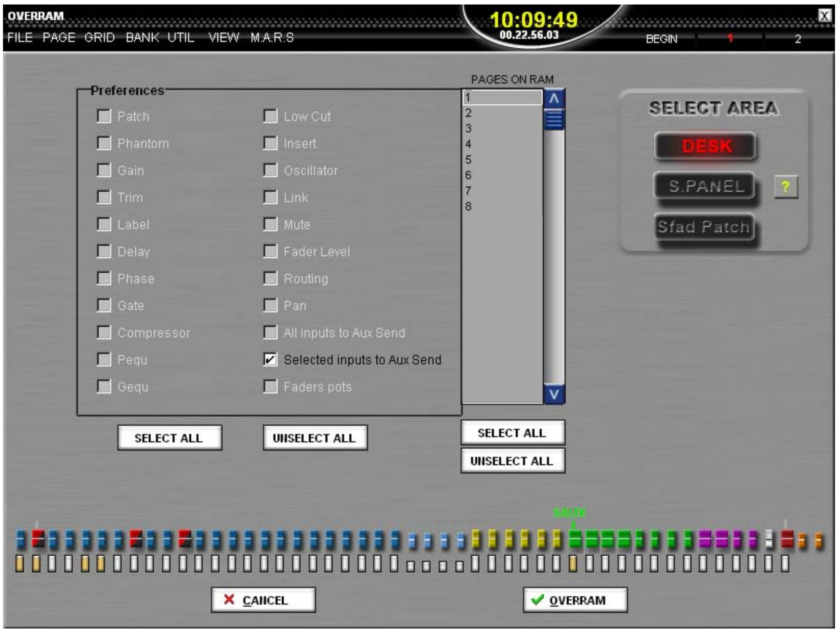
2. Tick the **Selected Inputs to Aux Send** option from the **Preferences** area.

All other options turn grey as you cannot combine this operation with other Over Ram parameters:



3. Select the input channel sends and the Auxes you wish to Over Ram by pressing their **SEL** buttons.

*The **SEL** buttons light, and are highlighted in yellow on the Over Ram display. In our example, we will update the Aux sends from faders 1&2 and 5&6 to the first stereo Aux:*



4. Select the Pages you wish to Over Ram from the list on the right.
5. When you are ready, press **OK** to perform the operation.

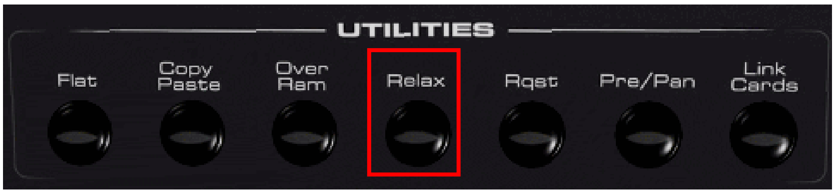
The selected Aux send mixes (from the selected input channels) are written into the selected Pages in RAM.

Relax (Automation Isolate)

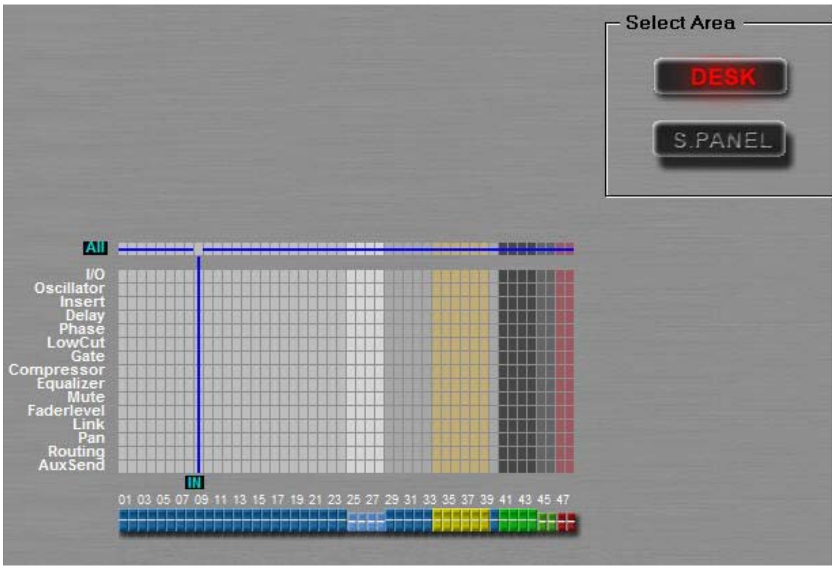
This button can be used to isolate parameters so that they are not reset by automation. The function "disconnects" the parameters of one or several channels from the automation system; a "relaxed" parameter is reset by any Page load.

	Relax (UTILITIES)
	"GRID -> Relax channel"
	n/a

1. Press **Relax** on the UTILITIES panel to open the **RELAX** display:



*The **RELAX** grid looks just like a patch grid and operates in a similar manner:*



On the left is a list of parameters which can be relaxed. Along the bottom are the console faders. You can select Fader strips or Smart Panel controllers (**DESK** or **S.PANEL**).

2. Select the channels you wish to Relax by pressing their **SEL** buttons.

If you have Smart Faders or Smart Busses, press their **SEL** button to deploy the slaves; you can then select the individual component channels.

3. Select a parameter using the trackball or arrow buttons on the console keyboard.
4. Press the [**SPACE BAR**], or right-click, to make the assignment.

A yellow box indicates a relaxed channel parameter.

Tip

Use the **All** crosspoint to relax all parameters on the channel.

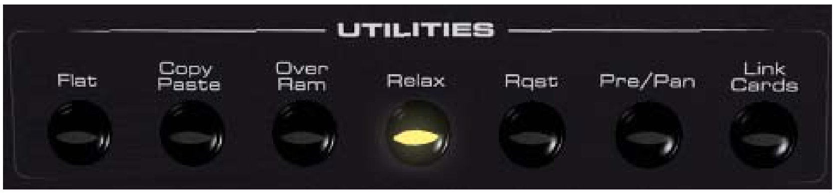
5. Now turn off the **Relax** button to return to the Main Mix display.

You will be asked to confirm any changes made to the **RELAX** grid.

6. Press **OK** to confirm.

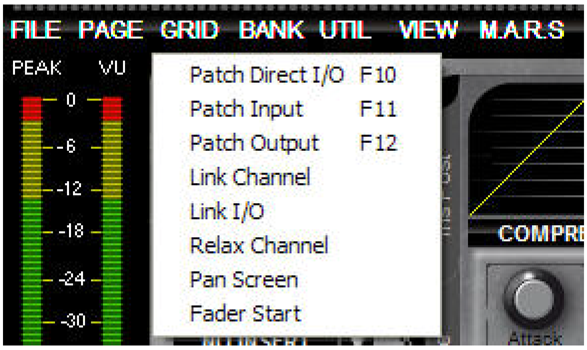
From here on, if you recall a Page using the Load Page, Goto, Next, Previous or automated Play List functions, any relaxed channel parameters are not reset.

Note that whenever you select a channel with relaxed parameters, the **Relax** button illuminates:



Note that the configuration of the **Relax** grid is saved in the active File. This means that when you load a File, the status of isolated channel parameters are remembered.

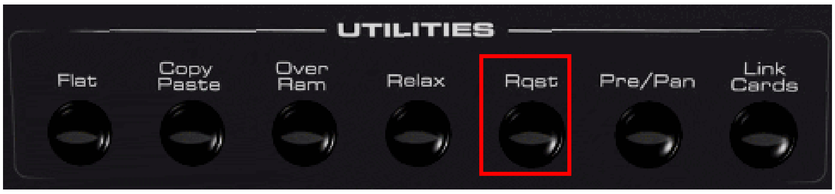
If you are working offline, you can select the **Relax channel** display from the **GRID** main menu:



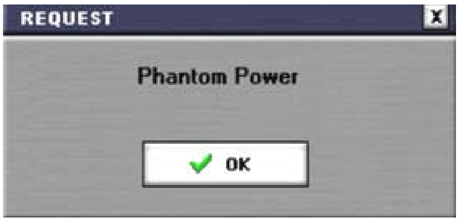
Request Mode

This button turns on Request mode which can be used to turn the channel select (**SEL**) buttons into on/off buttons for a requested parameter. This is a great way to view the status of a parameter across the console (e.g. 48V), or to change a parameter across multiple channels (e.g. EQ on).

1. Press the **Rqst** button on the UTILITIES panel to turn on Request mode:



*The **SEL** buttons across the console update to reflect the status of the pop-up window parameter – in our example, 48V phantom power:*

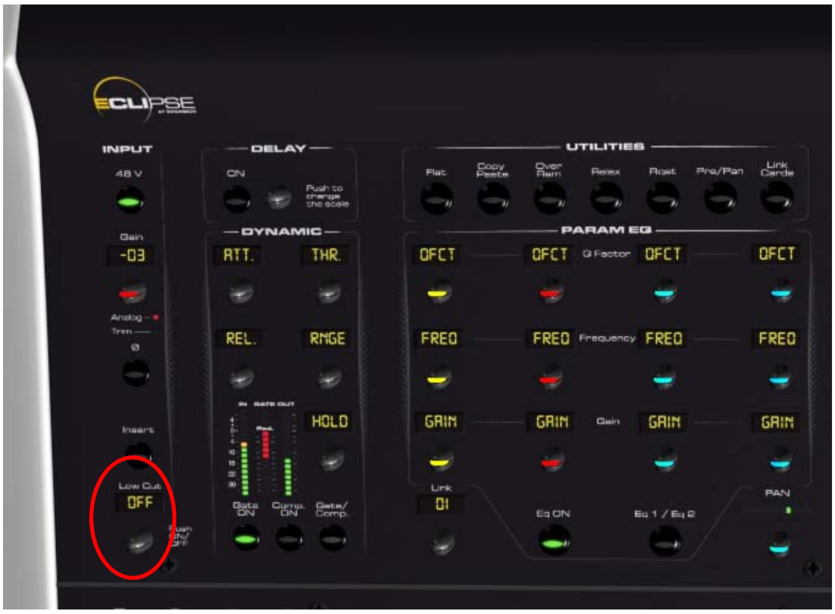

REQUEST

Phantom Power

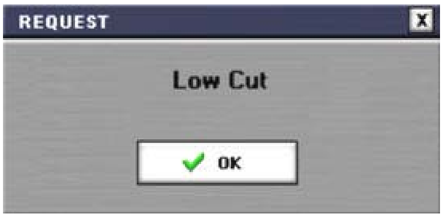
2. Press a **SEL** button to turn phantom power on or off.

You can use **SEL** buttons on Fader strips and Smart Panel controllers. Note that the functionality depends on the type of channel assigned to the strip; for example, you cannot select phantom power on an output channel!

3. To change a parameter, press the on/off button – for example, press Low Cut on/off:



*The **REQUEST** pop-up updates:*



4. Now you can press a **SEL** button to turn the Low Cut filter on or off.

By selecting different parameters while Request mode is active you can very quickly make changes across multiple channels.

Request mode can be used for:

- 48V phantom power (On/Off) – from the INPUT panel.
- Phase (On/Off) - from the INPUT panel.
- Low Cut Filter (On/Off) - from the INPUT panel.
- Gate (On/Off) - from the DYNAMIC panel.
- Compressor (On/Off) - from the DYNAMIC panel.
- Equaliser (On/Off) - from the PARAM EQ panel.
- Oscillator (On/Off) – press **Test** on the UTILITES panel.

5. When you have finished, exit Request mode by deselecting the **Rqst** button or pressing **CANCEL**.

Request mode is used for real-time operation only and therefore cannot be selected from the keyboard and mouse if working offline.

Note

Pre/Pan

This button opens the **PAN** display which provides an overview of bus routing from the selected channel (or to the selected output), with options to configure pre-fader or independent pan bus sends.

For details, please see Page 164.

Link Cards

This button opens the **LINK IO** display which can be used to link I/O parameters on an input or output card.

For details, please see Page 421.

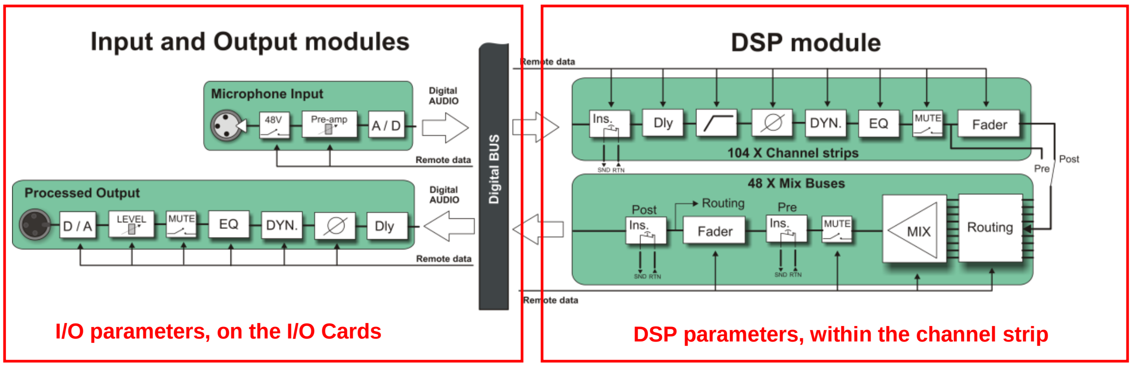
Linking

Any input, output or VCA channel can be linked to other channels of the same type.

Two different types of link group are available:

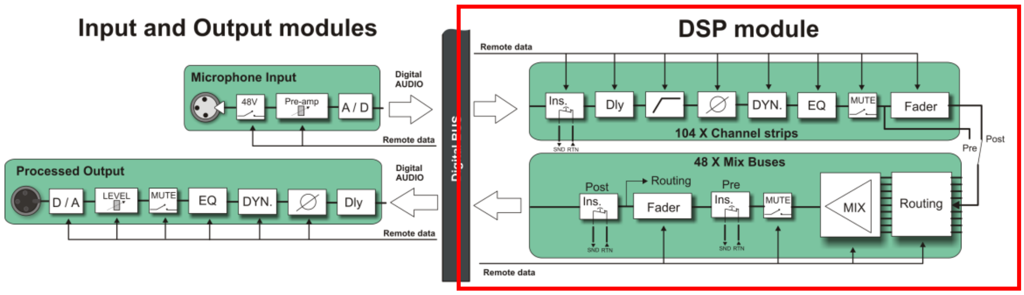
- **Channel Linking** – links the DSP processing sections provided by the Sy80 DSP module, see Page 410.
- **I/O Linking** – links any I/O parameters or processing on input or output cards, see Page 421.

For example, to link EQ and Dynamics on an input channel you would use channel linking. But to link the EQ and Dynamics on a UM8 processed output you would use I/O Linking. The diagram below summaries the differences:



Channel Linking

Channel linking is used to link DSP processing on the Sy80 card:



Up to 40 Link groups may be created, and the channels within each group operate as a ganged link. In other words, adjust one channel to adjust all channels in the group.

Links between channels are relative. For example, a change of EQ level from -8 to -4dB will add 4dB to the level of linked EQs in the group.

Tip

If you need to adjust the relative balance between linked channels, you can temporarily disable the link, Select and Hold the channel to temporarly unlink..

Note

Note the following points on channel linking:

- Only channels of the same type can be linked; for example, you cannot link input channels to output channels or vice versa.
- For any channel type, you can link Faders and Mutes.
- On input channels, you can also link Delay (if assigned), Gate, Compressor and Equaliser sections.
- On output channels, you can link Delay (if assigned), and any internal processing (one of the 16 floating DSP paths) inserted on the channel.
- To link output processing provided by a UM8 card use the **Link I/O** display, see Page 421.
- On Smart Faders, you can link the master VCA faders and mutes. To link individual channel processing, press **SEL** to deploy the slaves; you can then select the individual component channels.
- Channel links are saved and recalled from a Page.

Channel linking can be configured from the console, using **Smart Link** mode, or from the **LINK** display.

The console also supports a **Fast Link** mode. This creates a temporary link which you can use to update a parameter across several channels on the fly, see Page 318.

Smart Link Mode

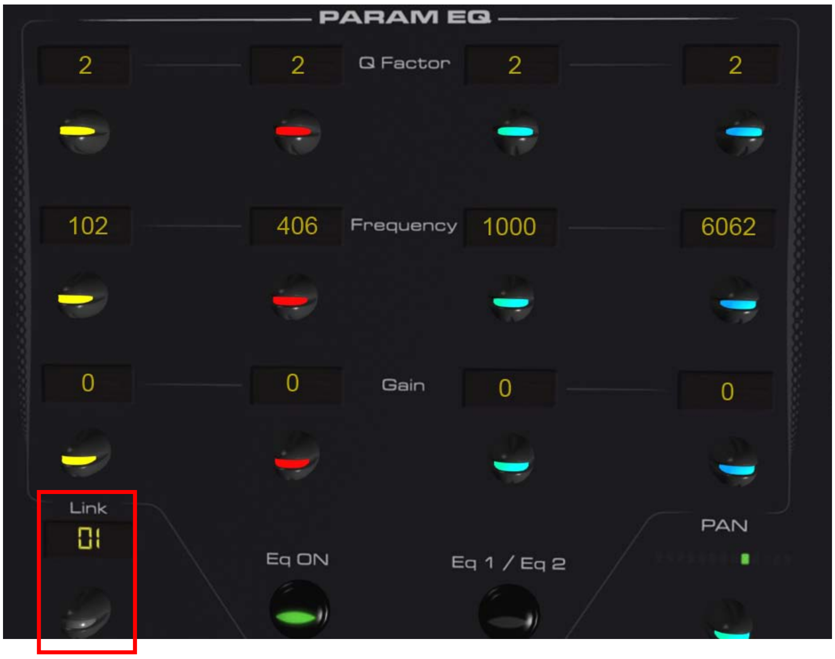
This is the fastest way to configure channel linking when working at the console.

Note that this method is not available if you are working offline; use the **LINK** display, see Page 416.

Note

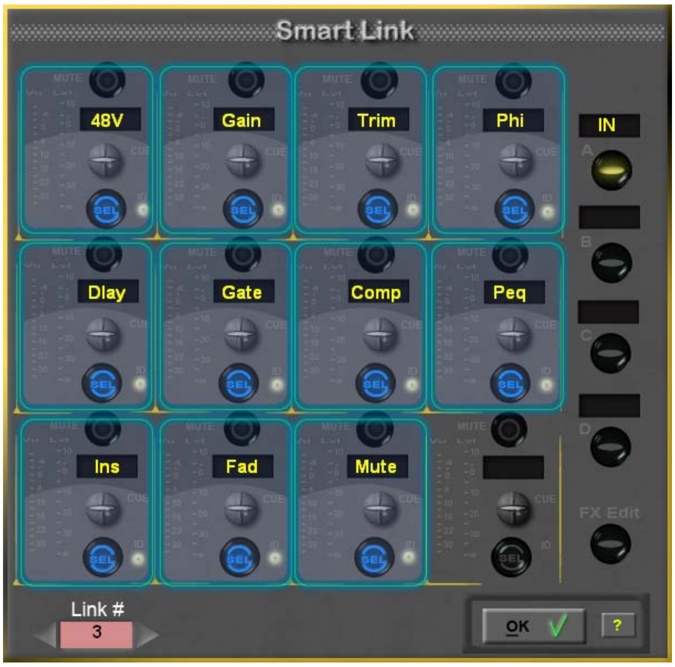
⏩ Creating a Link Group:

1. Select one the channels you wish to link by pressing its **SEL** button.
2. Then press down on the **LINK** rotary control, at the bottom of the PARAM EQ panel, to open the Smart Link window:

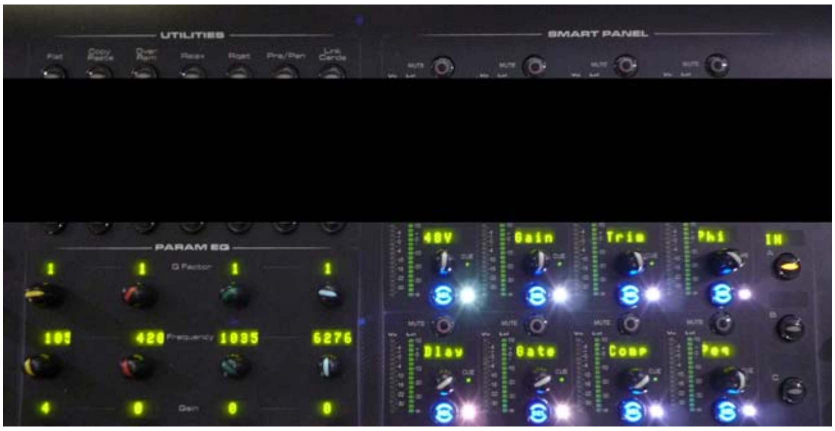


ECLIPSE	**LINK** **(PARAM EQ)**
🖱	n/a
⌨	n/a

*The **Smart Link** window opens:*



And the Smart Panel on the console surface updates to reflect the on-screen selections:



Note that if link groups have already been created, then the system automatically offers the next free link group number. The number is shown in the **LINK** control label (on the console) and on the Smart Link display – in our example, link group 3.

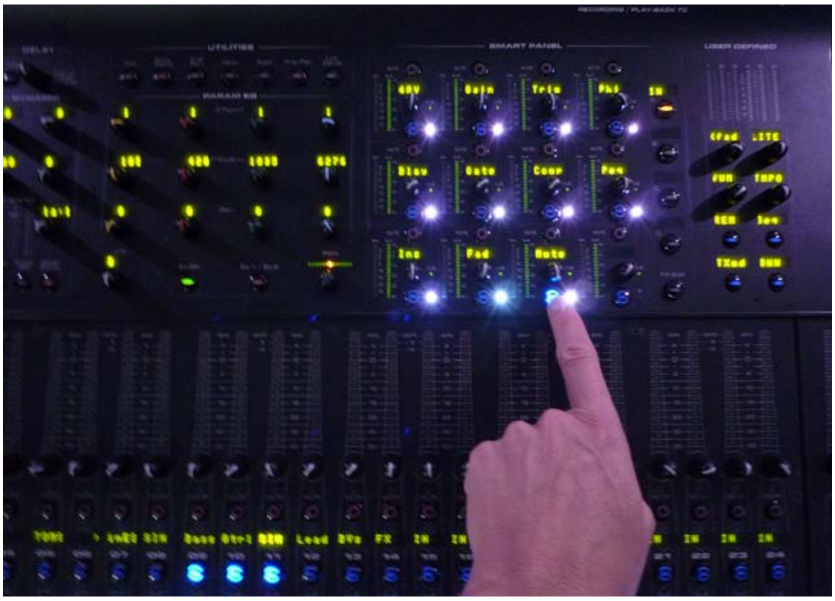
3. Press the **SEL** buttons on the channels you wish to add to the link group.

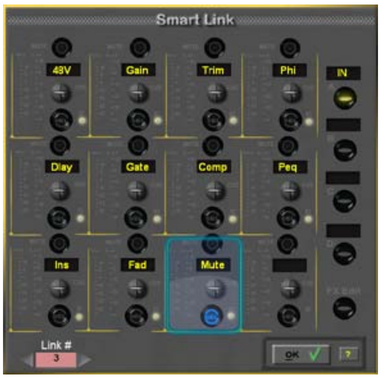
Note

Note that you will be warned if a channel already has parameters linked within another link group. Or if you attempt to select an invalid channel - for example, you cannot link input and output channels together.

4. Then use the Smart Panel **SEL** buttons, or touch-screen, to select the parameters you wish to link.

In our example, Link group 3 has Mutes linked for channels 9, 10 and 11:





5. Press **OK** to complete the operation and exit the **Smart Link** window.

The Smart Panel returns to its normal mode of operation.

The linked channels operate as a ganged link. In other words, adjust any channel in the group to adjust all linked parameters.

Links between channels are relative.

Link groups are saved and recalled from a Page. This means that you can recall different linking for each Page of the show.

⏩ Interrogating and Editing Link Groups:

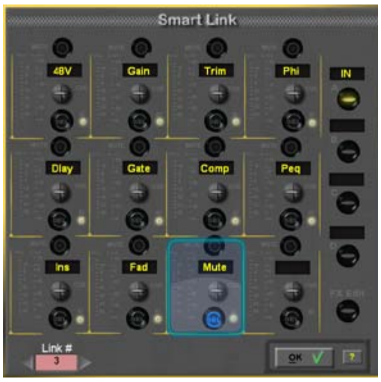
Having configured some link groups, you can interrogate and edit them from the console as follows:

1. Press down on the **LINK** rotary control to enter Smart Link mode.

*The **Smart Link** window opens and the Smart Panel on the console updates to reflect the linking selections.*

2. Turn the rotary control to select the link group number.

The console updates; the channel **SEL** buttons indicate which channels are linked, and the **Smart Link** window and Smart Panel show the linked parameters:



Note

Note that the Link group number at the bottom of the **Smart Link** window is pink if the group is used, and white if it is free.

Note also that the Smart Panel shows the type of channel parameters – **IN** or **OUT** in the A Label display.

3. Use the channel **SEL** and Smart Panel **SEL** buttons to edit the link group as before.

You can edit several link groups in one visit if you wish.

4. Press **OK** or press down on the LINK rotary control to exit Smart Link mode.

Alternatively, you can view and edit link groups from the **LINK** display, see Page 416.

⏩ Temporarily Cancelling a Link

If you need to adjust the relative balance between linked channels, you can temporarily remove a channel from the link group as follows:

1. Press and hold the **SEL** button on the channel you wish to adjust.
2. Move the parameter – e.g. the fader.

This adjusts the fader level of the individual channel.

3. Release the **SEL** button, and move the fader.

All linked channel faders move.

You can use this procedure to adjust any parameter – e.g. EQ gain, input gain, etc.

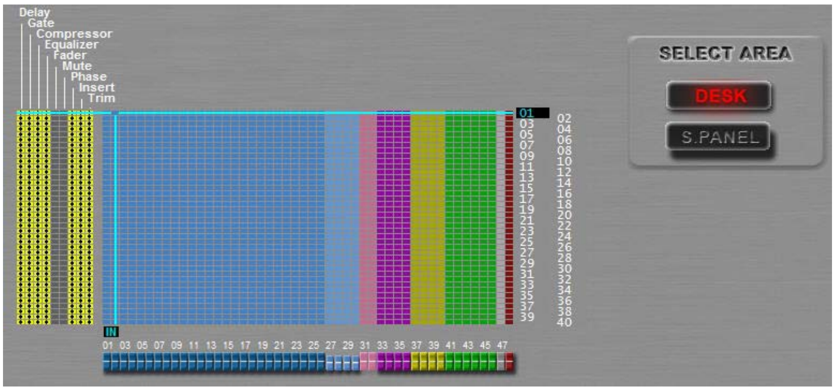
The Link Channel Display

Channel links can also be configured using the **LINK** display. If you are working offline, then this is the only method of configuring channel linking.

1. Select "**GRID -> Link Channel**" from the Nova menus:

	n/a
	"GRID -> Link Channel"
	n/a

*The **LINK** display looks just like a patch grid and operates in a similar manner:*



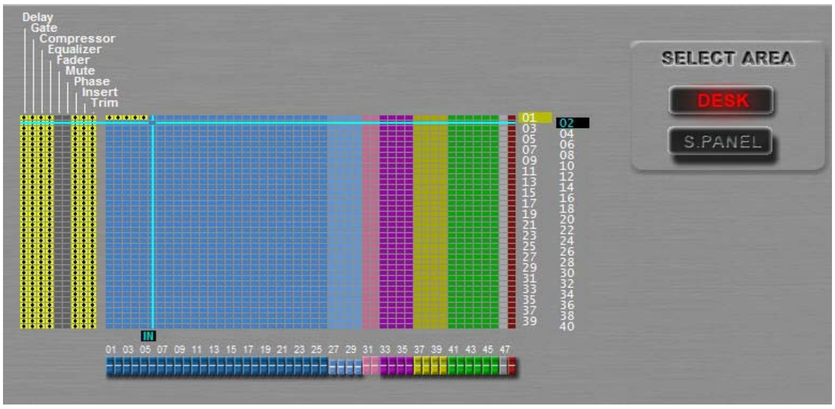
On the left you can select which parameters are included in each link group (01 to 40). Along the bottom are the console faders.

You can configure channel linking for Fader strips and Smart Panel controllers (**DESK** or **S.PANEL**).

To configure a Link group:

1. Select the first channel by pressing its **SEL** button.
2. Position the cursor over the next available link group (e.g. 01).
3. Press the [**SPACE BAR**], or right-click, to add the channel to link group 01.
4. Repeat these steps for each channel you wish to add to the link group.

*The **LINK** display should look something like this:*

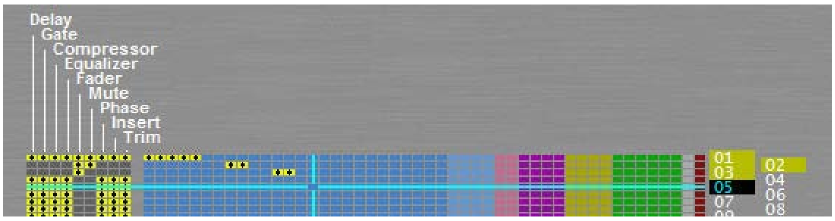


5. Now select the parameters which will be linked on the left of the grid.

If a parameter cannot be linked it turns from white to grey.

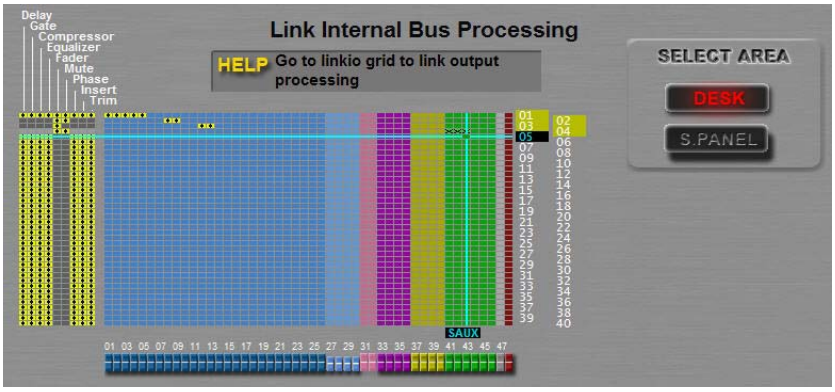
6. Repeat for each Link group you wish to create.

The example below shows three separate Link groups (01, 02 and 03), with different parameters linked in each group:



- Link group 01 – all parameters are linked across five consecutive channels.
- Link group 02 – faders and mutes are linked on two adjacent channels.
- Link group 03 – only the faders are linked on two adjacent channels.

Link groups for output channels are very similar but you can only link faders, mutes and internal processing; you are reminded in the Help area that if you wish to link UM8 output processing you will need to use the **LINK IO** display:


Link Internal Bus Processing

HELP Go to linkio grid to link output processing

If you have Smart Faders, you can link the master VCA faders and mutes. To link individual channel processing, press **SEL** to deploy the slaves; you can then select the individual component channels.

7. Once you have finished, press **CANCEL** to return to the Main Mix display.

Note

Fast Link Mode (GANG)

This mode can be used to create a temporary link group in order to update a parameter across several channels on the fly.

For example, to apply an EQ setting across a range of channels; link the channels using Fast Link mode; adjust the EQ parameters on any of the linked channels, then exit Fast Link to dissolve the group.

Tip

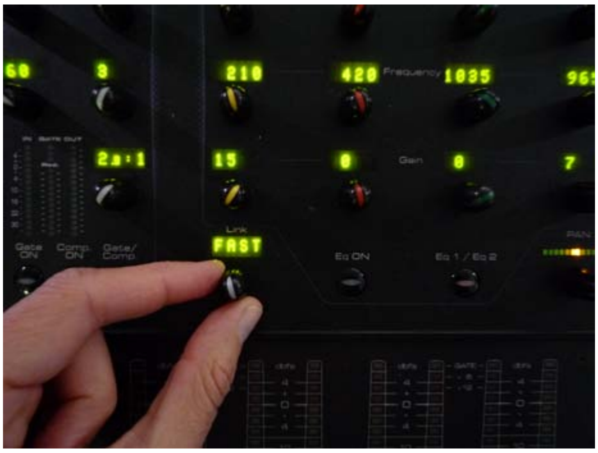
Using Fast Link mode can be faster than copying parameters via the Copy/Paste function.

Fast Link mode is similar to normal Link groups but has some important differences:

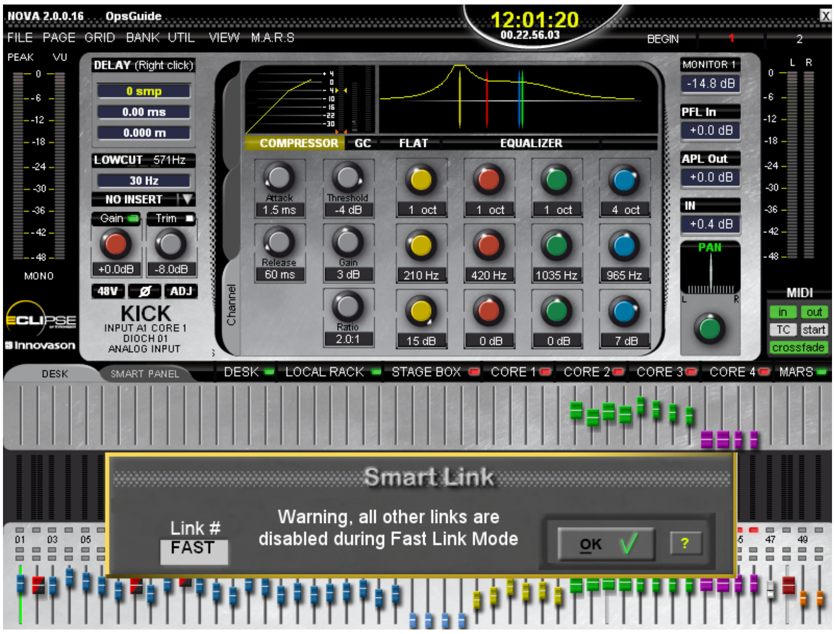
- There is only one Fast Link group – you cannot create multiple groups. Use Channel Links whenever you need multiple groups.
- The Fast Link group links *all* channel parameters.
- The Fast Link group is cancelled once you exit Fast Link mode.
- All other Channel Links are disabled while Fast Link mode is active.
- You cannot link input and output channels together.

Working in Fast Link Mode:

1. Press down on the **LINK** rotary control for more than 2 seconds to enter Fast Link mode:



*The **Fast Link** window opens over the current display:*



Warning, all other links are disabled during Fast Link Mode

2. Press the channel **SEL** buttons on the channels you wish to link.

*The **SEL** buttons light.*

Note that you cannot link input and output channels together.

Note

3. Now adjust a setting on one of the linked channels - for example, the EQ Gain on Band 3.

Note

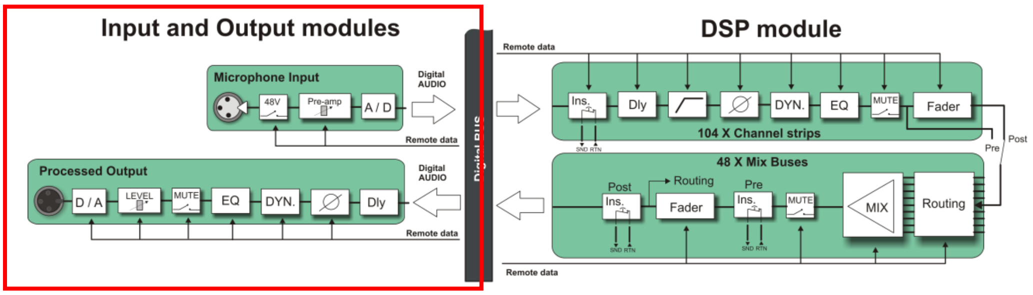
Note that you can adjust any channel parameter, and only this parameter is adjusted. In our example, EQ Gain on Band 3 is adjusted across the selected channels; any offsets are retained and other parameters such as the EQ frequency remain unaffected.

4. When you have finished, press **OK** or press down on the LINK rotary control to exit Fast Link mode.

*The **Fast Link** pop-up window cancels and the link group is dissolved.*

The Link IO Display

The **LINK IO** display is used to link I/O parameters or processing on input or output cards:



For inputs you can link:

- Gain - Analogue gain (SI-8 cards) or Digital trim
- Phantom Power - (SI-8 cards only)

For UM-8 processing outputs you can link:

- Gain (Analogue output level)
- Delay
- Gate
- Compressor
- Parametric EQ and Graphic EQ

Up to 40 input and 40 output Link groups may be created. Parameters within each group operate as a ganged link. In other words, adjust one channel to adjust all channels in the group.

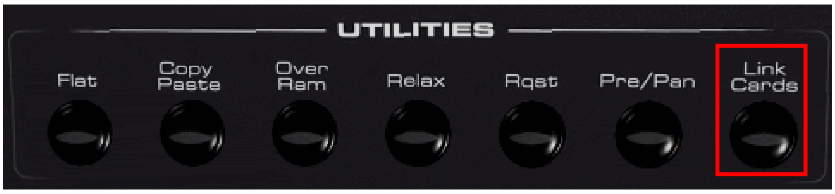
Links between channels are relative. For example, a gain change from 0dB to +3dB will add 3dB to the gain of all channels within the link group.

IO Links are saved and recalled from a Page.

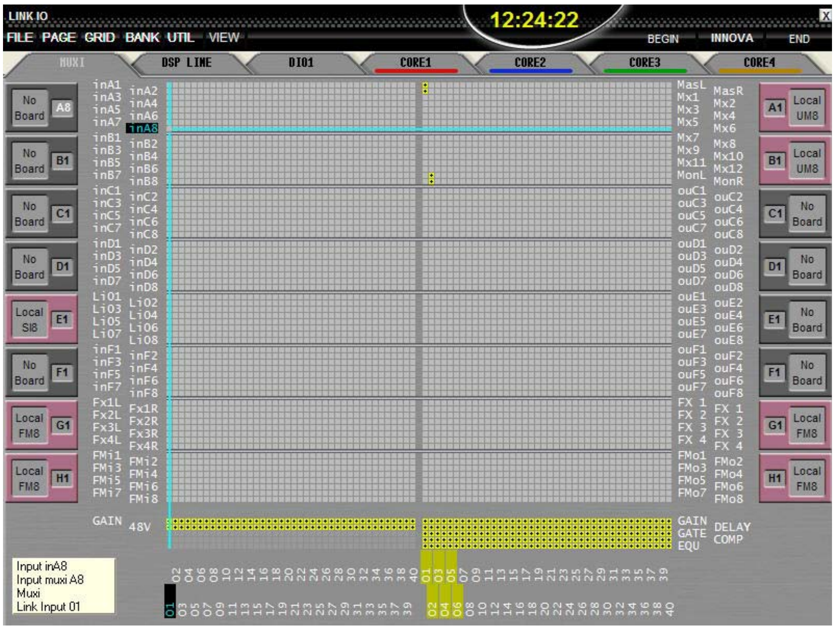
Creating an IO Link Group

1. Press the **Link Cards** button on the UTILITIES panel:

	Link Cards (UTILITIES)
	“GRID -> Link IO”
	n/a



*The **LINK IO** grid appears:*



Input inA8
Input muxi A8
Muxi
Link Input 01

On the left of the display you can configure input Link groups (01 to 40) for input cards (GAIN ad 48V).

On the right of the display you can configure output Link groups (01 to 40) for output cards (GAIN, GATE, etc).

2. Use the tabs at the top of the display to view different system I/O cards:

- **MUXI** – Muxipaire I/O (local or Stagebox cards)
- **DSP LINE** – Line level I/O on the DSP card at the rear of the console.
- **DIO1** – Ethersound channels.
- **Core 1 to Core 4** - DIO Core I/O cards

3. Use the grid to configure input and output link groups in a similar manner to channel link groups, see Page 416.

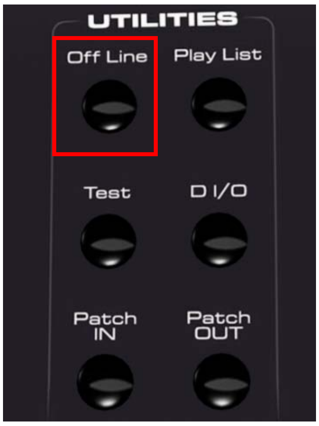
In the example above, UM8 processing (GAIN, GATE, etc.) has been linked on the Master Left and Right outputs (group 01), and Monitor Left and Right outputs (group 02).

Offline Mode

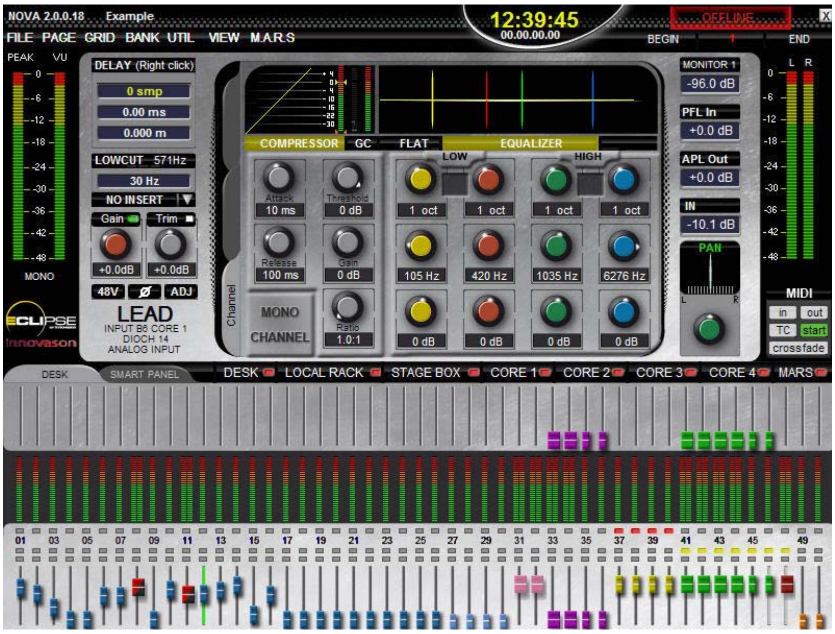
This mode allows you to recall a Page and adjust its settings without affecting the current audio mix. For example, if you want to check the next Page to be loaded without interrupting the current mix during a live show.

1. Press **Off Line** on the UTILITIES panel to activate Offline mode:

ECLIPSE	**Off Line (UTILITIES)**
	n/a
	[ALT] + [O]



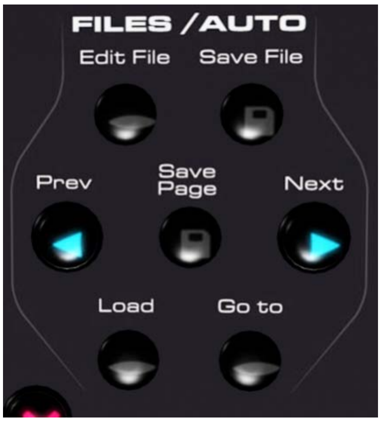
*Once active, a red **OFFLINE** alert appears at the top of the Nova display and all meters on the display go full scale:*



This mode is equivalent to disconnecting the console from its audio racks and DSP. So, if you make a change now you will no longer hear its results.

When you exit offline mode, the console is reconnected to the audio racks and DSP; all controls reset to the current Page. Therefore if you wish your mix to remain unchanged *DO NOT* alter the current Page in Offline mode!

Tip



2. *BEFORE* adjusting any parameters, recall the Page you wish to view or adjust – e.g. press **Next**.

The Page resets the console but you will hear no change in audio.

3. You can now check the parameters stored in the Page and make changes if you wish.

This updates the Page in RAM.

4. When you have completed your adjustments, recall the Page which matches the audio mix – in our example, we could press **Prev** to return to the previous Page.
5. Then deselect **Off Line**.

The console reconnects to the audio racks and DSP, and you will see the controls return to the settings of the current Page.

Providing you didn't modify the current Page, there will be no change in audio.

6. You can now operate the console in real time as usual.

Tip

The console also supports a function called **Preview** which is available when automating the console from the **Play List**. **Preview** temporarily enters an offline state and allows you to check settings within a Page selected from the **Play List**. Unlike **Offline** mode, which must be cancelled manually, **Preview** is automatically cancelled whenever the **Next** or **Prev** Page is recalled. See Page 379 for details.

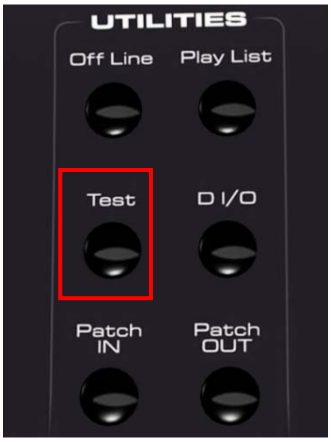
Test Signal (Oscillator)

Eclipse includes an internal signal generator which provides white and pink noise as well as a variable frequency oscillator.

The test signal can be assigned to any channel. Once assigned, it replaces any previously allocated signal.

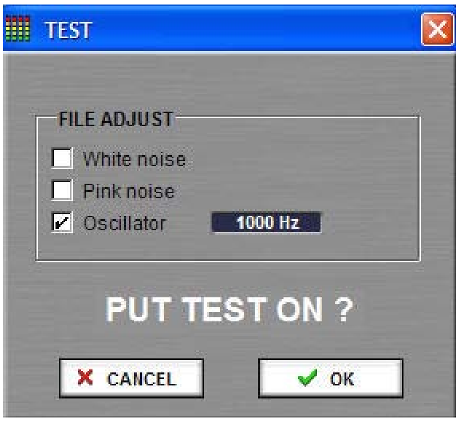
1. Press **SEL** on the channel you wish to apply test tone to.

2. Then press **Test** on the UTILITIES panel:



ECLIPSE	**Test (UTILITIES)**
🖱	n/a
⌨	**[O]**

The following window appears where you can configure the test signal:



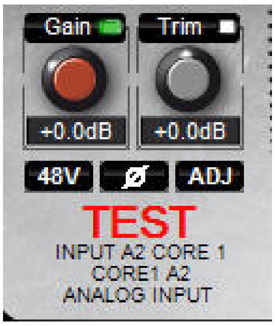
FILE ADJUST
☐ White noise
☐ Pink noise
☑ Oscillator 1000 Hz

3. Tick one of the checkboxes to select a signal type.

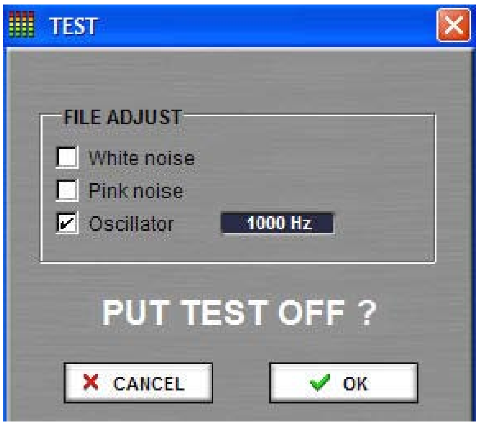
For the Oscillator, left-click or right-click on the frequency to decrease or increase the frequency in fixed steps. The Oscillator level is fixed at -8dBFS, and its frequency may be adjusted from 16Hz to 16kHz in steps of 1/20 octave.

4. Press **OK** to apply the test signal to the selected channel.

You will see ***TEST*** *appear in the Label area of the Main Mix display.*



5. To turn off the test signal, select the channel and press **Test** again:



6. Press **OK** to remove the test signal.

The channel returns to its previous assignment.

Fader Start

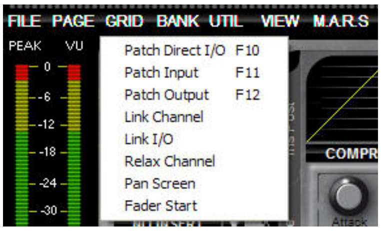
This function can be used to assign a fader start to a Fader or Smart Panel rotary controller. For example, to start/stop a CD player when you open/close a fader.

Once configured, the fader start sends **MIDI Note ON** and **Note OFF** messages, to the **MIDI Out** connector at the rear of the console, each time the fader is opened and closed.

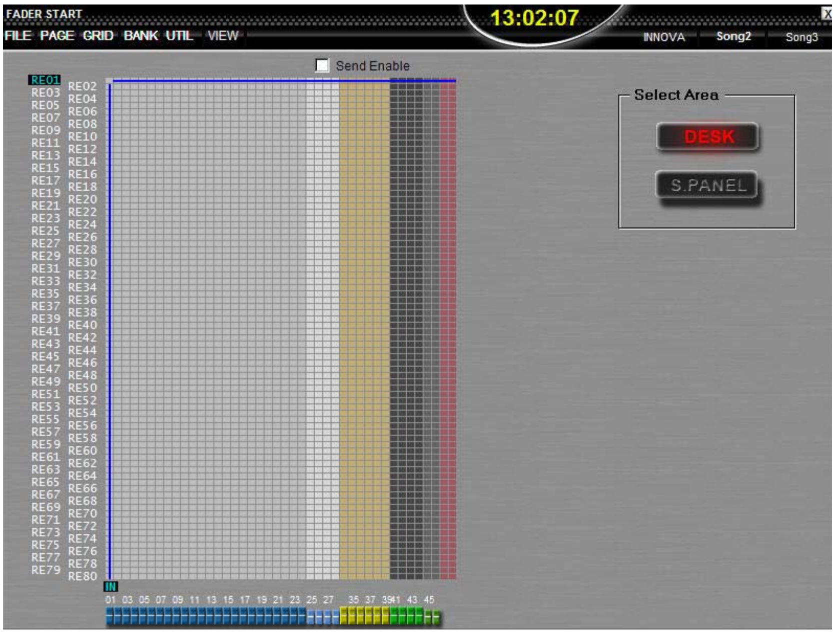
These MIDI signals can be converted to relay closures using a separate interface box. Innovason recommend the 8-channel relay unit manufactured by MIDI Solutions. Please contact out service department for further information on this unit.

Fader starts are configured from the **FADER START** display:

1. Using the trackball, select "**GRID -> Fader Start**".



This display operates just like any other patch grid:



On the left are listed the MIDI note numbers which will transmit the Note ON and Note OFF messages. Along the bottom are the console faders.

You can configure fader starts for Fader strips and Smart Panel controllers (**DESK** or **S.PANEL**).

2. Press the [**SPACE BAR**], or right-click, to make an assignment on the grid.
3. When you have completed all the assignments, tick the **Send Enable** checkbox and exit the display.

Note

The **Send Enable** is the same as the MIDI **start** automation button on the Main Mix display, see Page 381.

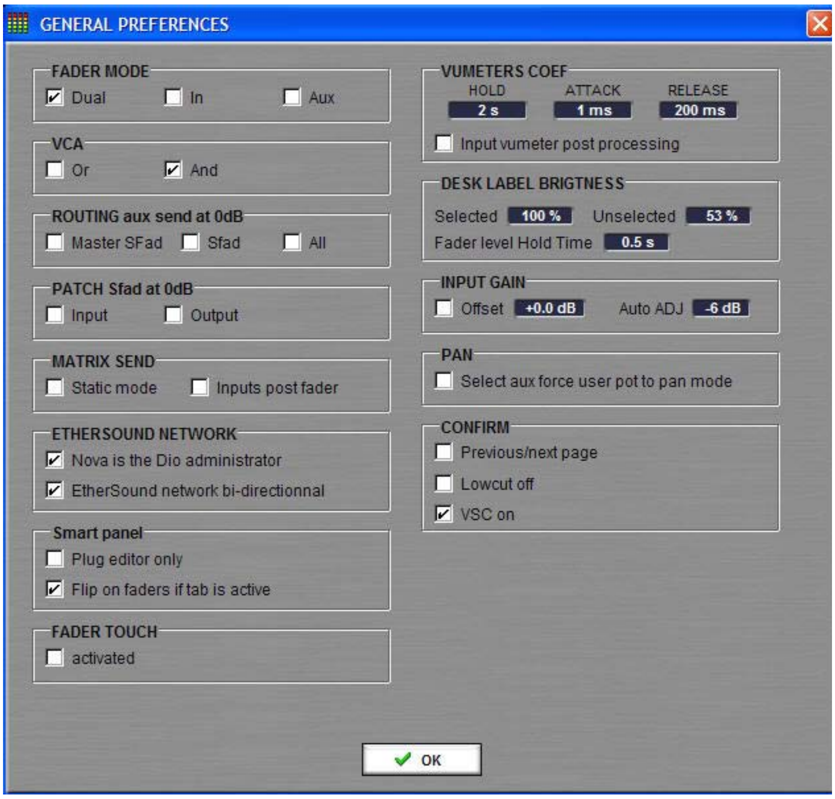
The fader now transmits MIDI Note On and Note off messages as it opens and closes (to/from –infinity).

General Preferences

	PREF **(USER DEFINED PANEL)**
	“UTIL -> General Preferences”
	n/a

1. Select “**UTIL** -> **General Preferences**”.

A switch on the User Defined panel can also be assigned to open this window, see Page 322.



FADER MODE
☑ Dual ☐ In ☐ Aux

VCA
☐ Or ☑ And

ROUTING aux send at 0dB
☐ Master SFad ☐ Sfad ☐ All

PATCH Sfad at 0dB
☐ Input ☐ Output

MATRIX SEND
☐ Static mode ☐ Inputs post fader

ETHERSOUND NETWORK
☑ Nova is the Dio administrator
☑ EtherSound network bi-directionnal

Smart panel
☐ Plug editor only
☑ Flip on faders if tab is active

FADER TOUCH
☐ activated

VUMETERS COEF
HOLD 2 s
ATTACK 1 ms
RELEASE 200 ms
☐ Input vumeter post processing

DESK LABEL BRIGTNESS
Selected 100 %
Unselected 53 %
Fader level Hold Time 0.5 s

INPUT GAIN
☐ Offset +0.0 dB
Auto ADJ -6 dB

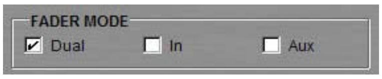
PAN
☐ Select aux force user pot to pan mode

CONFIRM
☐ Previous/next page
☐ Lowcut off
☑ VSC on

2. Select the preference options and then press **OK** to confirm.

⏩ Fader Mode

This mode determines how input and Aux faders will behave when an input or Aux channel is selected. The options are:



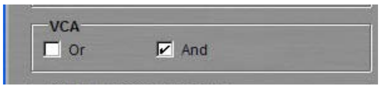
FADER MODE
☑ Dual ☐ In ☐ Aux

- **Dual** – the default mode as described on Page 74. When an Aux is selected, input faders act as aux sends. Conversely, when an input is selected, Aux faders control the aux sends.
- **In** - input channel faders *always* control main level and not Aux send level.
- **Aux** - Aux channel faders *always* control Aux master level and never Aux send levels.

⏩ VCA

Determines the logic used when the same channel to assigned to more than one VCA, see Page 193. The options are:

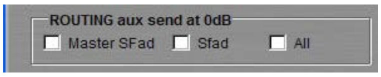
- **OR (Priority logic)** – the VCA having the highest level is applied to the slave channel.
- **AND (Additional logic)** - the levels of each VCA are summed and applied to the slave channel.


VCA
☐ Or ☑ And

⏩ Route Aux Send 0dB

When ticked, as soon as an input is routed to an Aux, the Aux send is automatically set to 0dB. You can set this option for:

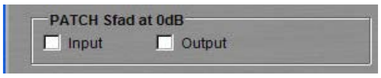
- **Master Sfad** – only Smart Fader VCA Aux sends are set to 0dB.
- **Sfad** – only Smart Fader slave Aux sends are set to 0dB.
- **All** – all channels (inputs and Smart Faders) have Aux sends set to 0dB.


ROUTING aux send at 0dB
☐ Master SFad ☐ Sfad ☐ All

⏩ Patch Sfad 0dB

When ticked, as soon as a Smart Fader is patched, the level of the slave channels are automatically set to 0dB. You can set this option for:

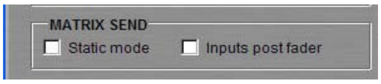
- **Input** – Smart Fader inputs are set to 0dB.
- **Output** – Stereo Bus component channels (Left, Right and Centre) are set to 0dB.


PATCH Sfad at 0dB
☐ Input ☐ Output

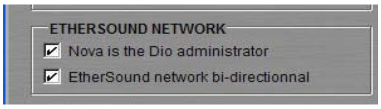
⏩ Matrix Send

Determines the Matrix send mode and send position for input channels, see Page 170. The options are:

- **Static mode** – selects Static Matrix send assign mode. Uncheck this box for Active assign mode.
- **Inputs post fader** – selects post-fader sends when Matrices are assigned from input channels. Uncheck this box for pre-fader sends.


MATRIX SEND
☐ Static mode ☐ Inputs post fader

⏩ Ethersound Network



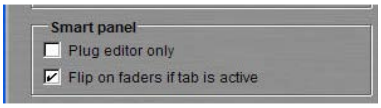
ETHERSOUND NETWORK
☑ Nova is the Dio administrator
☑ EtherSound network bi-directionnal

Determines Ethersound network preferences if you are working with a third party Ethersound device. The options are:

- **Nova is the Dio administrator** – tick this option and Nova determines the Ethersound configuration; other administrators can visualise assignments but cannot modify them.
- **Ethersound network bi-directional** – untick this option if you wish the Ethersound network to be mono-directional (for example, if your network uses Hubs or Switches).

Please refer to the Eclipse Technical Manual for more information on these options.

⏩ Smart Panel

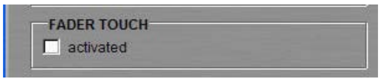


Smart panel
☐ Plug editor only
☑ Flip on faders if tab is active

Sets options for the Smart Panel:

- **Plug editor only** – tick this option to lock the Smart Panel into **FX Edit** mode, see Page 301.
- **Flip on faders if tab is active** – tick this option and each time you select **Desk** or **Smart Panel**, on the console or Nova display, the 48 channels assigned to the Smart Panel are mapped down onto the 48 Faders, see Page 79.

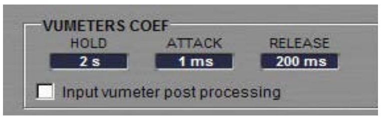
⏩ Fader Touch



FADER TOUCH
☐ activated

When ticked, you will see the fader level (in dB) in the Label displays when you touch a fader.

⏩ VU Meters Coef



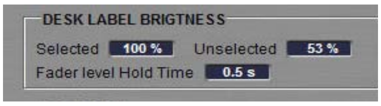
VUMETERS COEF
HOLD 2 s
ATTACK 1 ms
RELEASE 200 ms
☐ Input vumeter post processing

Determines the meter ballistics for the console's VU meters (on the console and on-screen). The options are:

- **HOLD** – meter hold time (seconds).
- **ATTACK** – meter attack time (ms).
- **RELEASE** – meter release time (ms).
- **Input vumeter post processing** – tick this option to switch input channel metering post processing.

Desk Label Brightness

Sets options for the Label displays (4-character Labels) across the console:

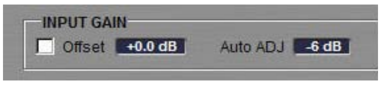


DESK LABEL BRIGTNESS
Selected 100 % Unselected 53 %
Fader level Hold Time 0.5 s

- **Selected** – sets the brightness of the selected channel Label.
- **Unselected** – sets the brightness of all other channel Labels (not selected).
- **Fader level Hold Time** – this option sets the amount of time the fader level will be displayed for when you touch a fader.

Input Gain

Sets options for analogue mic preamp inputs:



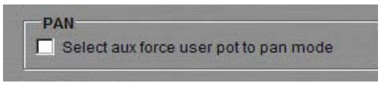
INPUT GAIN
☐ Offset +0.0 dB Auto ADJ -6 dB

- **Offset** – tick this box to apply a display offset to mic preamp gain. Left-click or right-click to adjust the offset in 1.5dB steps.

With an incoming signal at +4dBu and an Analogue Gain of 0dB, an Offset of +0dB provides -8dBFS; an Offset of +9dB provides -17dBFS. See Page 133 for details on input gain.

- **Auto ADJ** – this is the level adjustment which be applied to *all* input channels when the ADJ function is used, see Page 136.

Pan

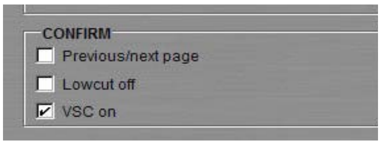


PAN
☐ Select aux force user pot to pan mode

- **Select aux force user pot to pan mode** – tick this option if you wish to force the Fader strip rotary control to Pan mode whenever an Aux is selected.

Confirm

Determines whether a confirmation pop-up (**OK** or **CANCEL**) appears for the following operations:



CONFIRM
☐ Previous/next page
☐ Lowcut off
☑ VSC on

- **Previous/next page** – see Page 363.
- **Lowcut off** – see Page 137.
- **VSC on** – see Page 444.

Lock (Password Protection)

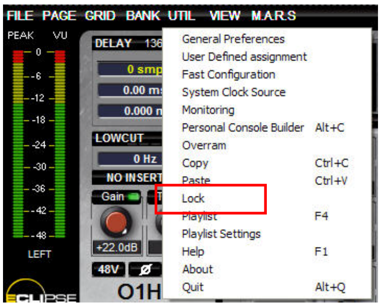
This function allows you to password protect console elements. For example, to avoid accidental operator error during a live show, or when leaving the console unattended for tea break!

You can lock the following elements:

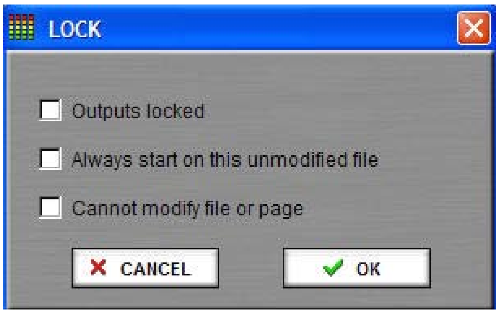
- The active File and all its Pages – prevents the active File from being overwritten or deleted, and any Pages being updated.
- Output processing – prevents modification of all output processing.

To configure a console lock:

1. Using the trackball, select "**UTIL -> Lock**".



The following pop-up appears:



☐ Outputs locked

☐ Always start on this unmodified file

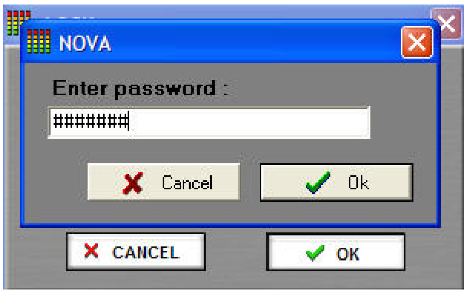
☐ Cannot modify file or page

2. Select which elements you wish to protect:

- **Outputs locked** – prevents modification of all output processing (UM8 cards).
- **Always start on this unmodified file** – tick this checkbox and the console will always boot up using the current File.
- **Cannot modify file or page** - prevents the active File from being overwritten or deleted, and any Pages being updated.

3. Once you have made your selections, press OK.

Another dialogue box appears asking for a password:



Enter password : ########

4. Type in a password and press **OK**.

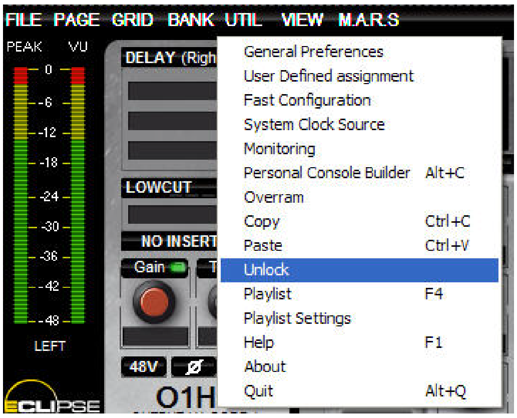
5. Retype your password to confirm it, and press **OK**.

The selected functions are now locked. Let's assume you selected all the options.

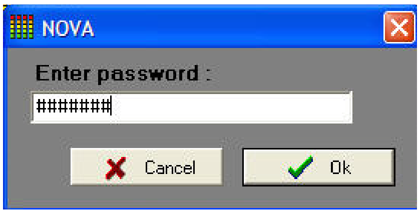
If someone attempts to make adjustments, then a "**NOT AVAILABLE**" pop-up warns them.

When you return to the console, you can unlock it as follows:

1. Using the trackball, select "**UTIL -> Unlock**":



2. Type in your password:



Enter password : ########

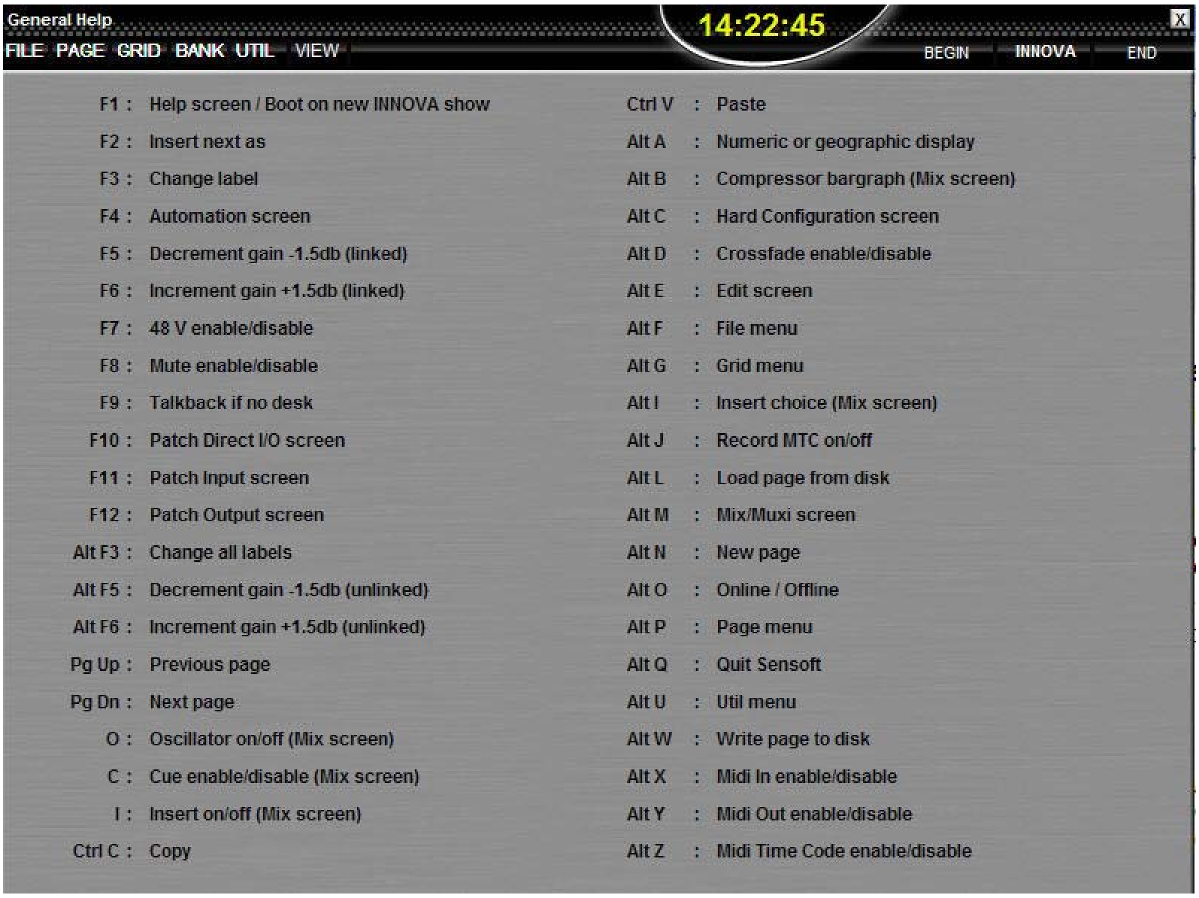
3. And press **OK**.

The console unlocks.

Help (Keyboard Shortcuts)

The **General Help** display provides an overview of all console keyboard shortcuts:

1. Press [**F1**] on the console keyboard, or select “**UTIL -> Help**”, to open the display:

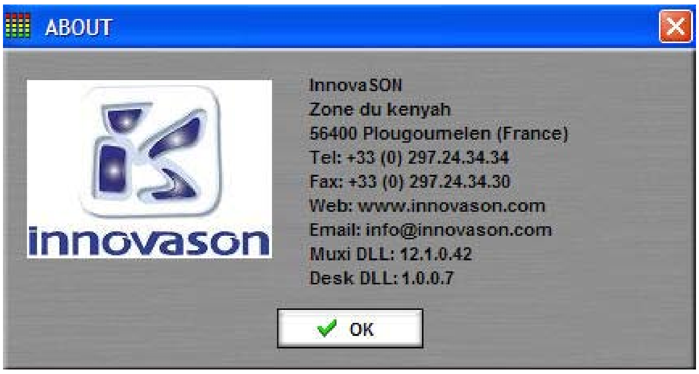


F1 : Help screen / Boot on new INNOVA show
F2 : Insert next as
F3 : Change label
F4 : Automation screen
F5 : Decrement gain -1.5db (linked)
F6 : Increment gain +1.5db (linked)
F7 : 48 V enable/disable
F8 : Mute enable/disable
F9 : Talkback if no desk
F10 : Patch Direct I/O screen
F11 : Patch Input screen
F12 : Patch Output screen
Alt F3 : Change all labels
Alt F5 : Decrement gain -1.5db (unlinked)
Alt F6 : Increment gain +1.5db (unlinked)
Pg Up : Previous page
Pg Dn : Next page
O : Oscillator on/off (Mix screen)
C : Cue enable/disable (Mix screen)
I : Insert on/off (Mix screen)
Ctrl C : Copy

Ctrl V : Paste
Alt A : Numeric or geographic display
Alt B : Compressor bargraph (Mix screen)
Alt C : Hard Configuration screen
Alt D : Crossfade enable/disable
Alt E : Edit screen
Alt F : File menu
Alt G : Grid menu
Alt I : Insert choice (Mix screen)
Alt J : Record MTC on/off
Alt L : Load page from disk
Alt M : Mix/Muxi screen
Alt N : New page
Alt O : Online / Offline
Alt P : Page menu
Alt Q : Quit Sensoft
Alt U : Util menu
Alt W : Write page to disk
Alt X : Midi In enable/disable
Alt Y : Midi Out enable/disable
Alt Z : Midi Time Code enable/disable

About

1. Using the trackball select “**UTIL -> About**” to open the following pop-up window:



InnovaSON
Zone du kenyah
56400 Plougoumelen (France)
Tel: +33 (0) 297.24.34.34
Fax: +33 (0) 297.24.34.30
Web: www.innovason.com
Email: info@innovason.com
Muxi DLL: 12.1.0.42
Desk DLL: 1.0.0.7

This provides contact information for Innovason, and information on the Muxi and Desk DLL. You may be asked for this information should you need to contact our Service department.

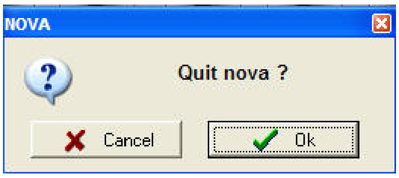
2. Press **OK** to clear this window.

Console Shutdown (Quit)

To shut down the console it is good practice to quit the Nova software before powering off:

1. Using the trackball select "**UTIL -> Quit**" from the main menus, or click on the **X** at the top right of the screen.

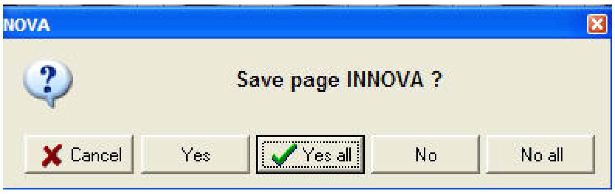
You will be asked to confirm the shutdown:


NOVA

Quit nova ?

2. Press **OK** to continue.

You will now be asked if you wish to save each of the Pages in RAM to the active File:


NOVA

Save page INNOVA ?

- Press **CANCEL** to cancel the shutdown operation.
- Select **Yes** to save just this Page; you will then be asked about each Page in turn.
- Press **OK** (**Yes all**) to save all Pages to the active File.
- Select **No** if you don't want to save this Page; you will then be asked about the remaining Pages in turn.
- Select **No all** to shutdown without saving any Pages to the active File.

Any option other than **CANCEL** will quit the Nova software; you will see a screen message indicating that it is safe to power off.

Chapter 9: Offline Configuration

Introduction

This chapter deals with the operation of the Nova software from an offline PC.

By preparing Pages and saving them into a File, you can build a configuration ahead of an event and load the File onto the console when you arrive.

As each Nova display has already been covered in the main part of this manual, here we will deal with the basic operating principles when using a keyboard, mouse and keyboard. You will find a summary of all functions on Page 434.

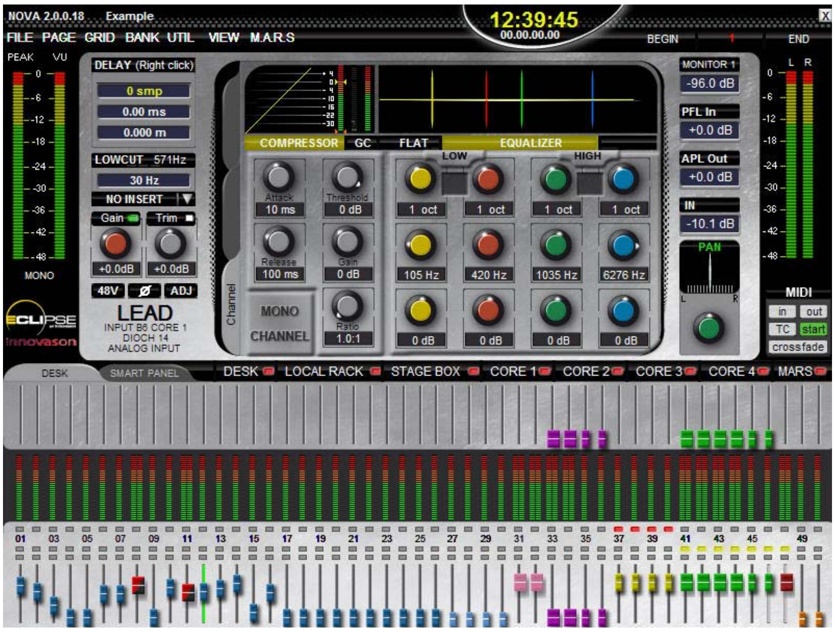
Each release of Nova contains an archive file named “nova.zip”. The archive is the only necessary file to run NOVA offline on your LapTop. Just uncompress “nova.zip” in a folder of your LapTop and launch nova.exe to run NOVA.

NOVA is validated to run under WinXP and Win7 32bit (in XP Service Pack 3 compatibility mode).

Working Offline

Everything which can be operated from the console is also available using a keyboard, mouse and keyboard with the Nova software running on an external PC. This allows you to configure and save data to your hard disk which may later be transferred onto the Eclipse console.

Note that when you work offline, the Nova meters show levels at full scale rather than at normal operating levels:



This is quite normal; once you have imported your File to a real live Eclipse console, the console metering will work in real time.

Saving and Importing to the Console

Just as if you were sat at the console you can create multiple Pages and save them into a File. Copy the Nova File to a USB interface to import the data to the Eclipse console. See Chapter 7 for details on these operations.

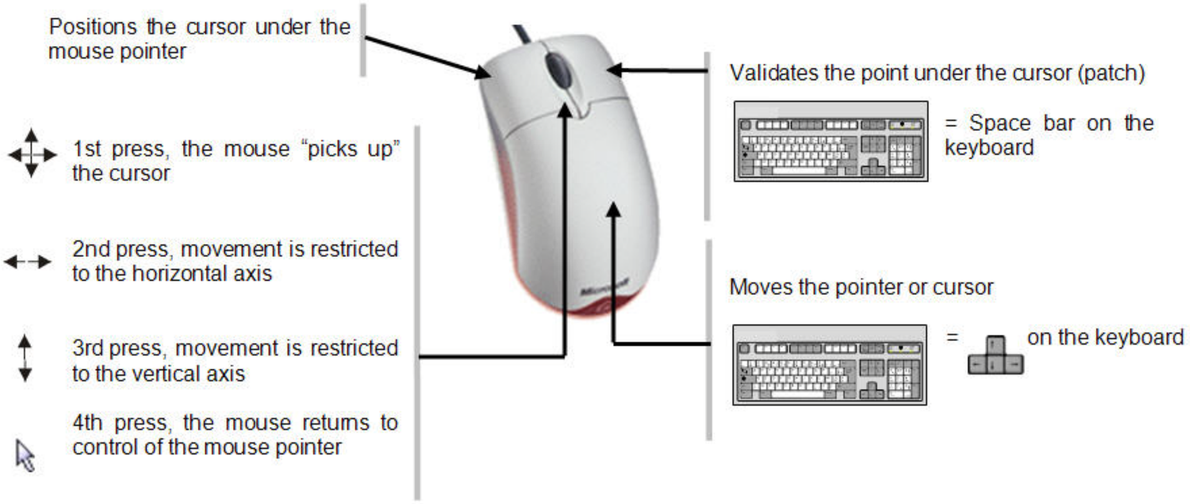
Note

Note that when you import a File, only parameters which are consistent between the offline configuration and the actual console will be loaded. For example, if you have configured a different set of I/O cards to those fitted in the console, you may not be able to load your mix! Therefore, it is a good idea to try and get hold of the exact system configuration (IO and Effects card specification) before you begin an offline configuration.

Mouse and Keyboard Operation

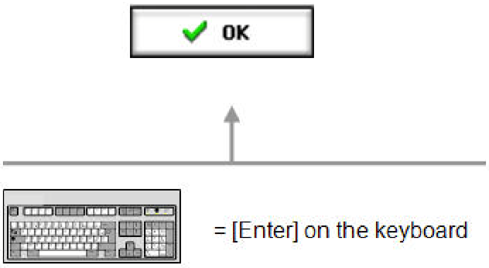
A mouse or pen/tablet combination, connected to an external PC, usually have two command buttons. Some are also fitted with a scroll wheel (not used by Nova). However, the scroll wheel often acts as a third button which Nova can exploit.

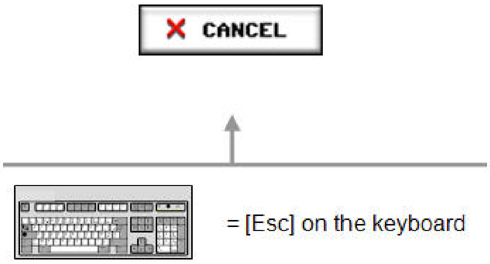
The diagram below shows the functionality of the left-click, right-click and scroll wheel button, and the equivalent keyboard operations:


Positions the cursor under the mouse pointer
1st press, the mouse "picks up" the cursor
2nd press, movement is restricted to the horizontal axis
3rd press, movement is restricted to the vertical axis
4th press, the mouse returns to control of the mouse pointer
Validates the point under the cursor (patch)
= Space bar on the keyboard
Moves the pointer or cursor
= on the keyboard

Confirming Operations

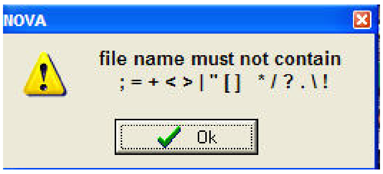
Quite often you will need to confirm an operation. You can either point and left-click on the **OK** or **CANCEL** buttons, or use the [**Enter**] or [**Esc**] keyboard shortcuts:





Names

You will need to use a keyboard to enter names such as Labels, File names, etc. Names may be limited to a certain number of characters, and cannot contain spaces or invalid characters:



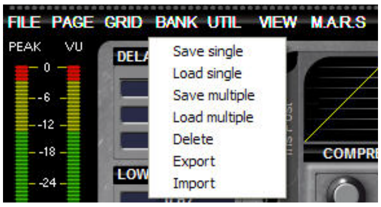
NOVA

file name must not contain
; = + < > | " [] * / ? . \ !

Ok

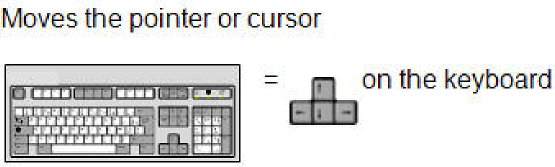
Keyboard Shortcuts

The keyboard also provides access to several short-cuts. For example, to name a Label, you would press [**F3**] on the console keyboard. For a full list of shortcuts, see Page 434.

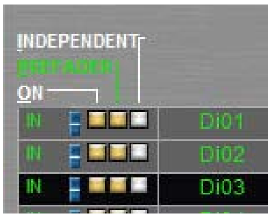


You can also use the keyboard to select Nova menus:

1. Press [**ALT**] plus the underlined letter of the main menu (FILE, PAGE, BANK). For example, press [**ALT**] + [**K**] to open the Bank menu.
2. Once open, use the Up/Down arrow keys to select a submenu option:


Moves the pointer or cursor
=
on the keyboard

3. Press [**Enter**] to confirm the selection.



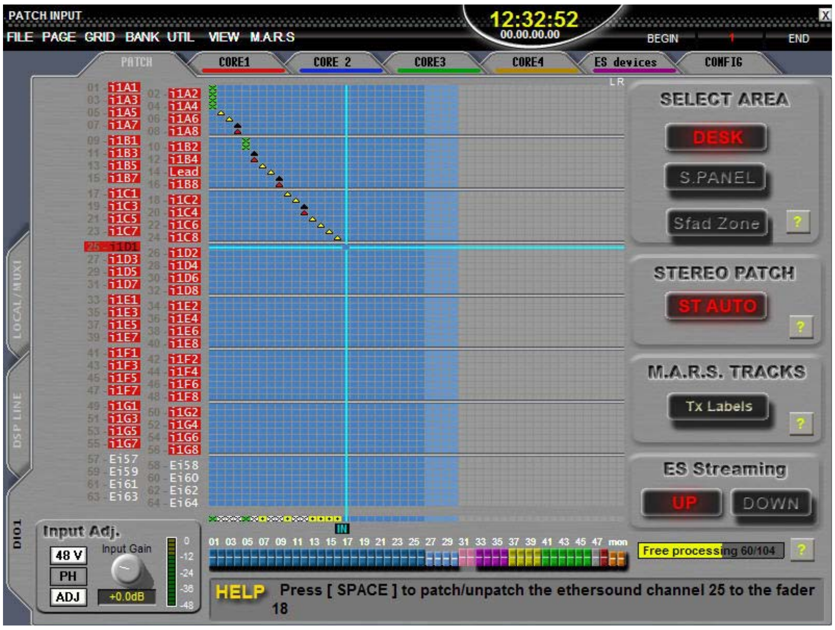
Often you will use the keyboard to select a function by pressing the letter underlined on-screen; in the **PAN** display, shown opposite, pressing [**O**] selects On, [**P**] selects Prefader, and [**I**] selects Independent.

Building a Configuration

All of the Nova displays can be configured offline in the same manner as on the console. This allows you to use the Personal Console Builder and Patch grids to prepare a configuration in the normal manner. See Pages 221 and 231 for detailed information on these displays.

Working with Grid displays

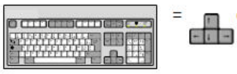
Here are some tips when working from a mouse and keyboard in grid displays such as the **PATCH INPUT**:



Press [SPACE] to patch/unpatch the ethersound channel 25 to the fader 18

1. Position the cursor using the left-click mouse button, or the Up/Down/Left/Right arrow buttons on the keyboard.

Moves the pointer or cursor



on the keyboard

2. Make a patch by:

- Pressing [**SPACE bar**] on the keyboard.
- Or, using the right-click mouse button.

3. To exit the current display, press [**ESC**] on the keyboard.

Within the **Patch In**, **Out** and **Direct** displays, you can access Labels by pressing [**F3**] or name a range of inputs or outputs by pressing [**ALT**] + [**F3**], see Page 205.

You can also use the following keyboard shortcuts:

- [**F6**] – Increments the gain of the selected input.
- [**F5**] – Decrements the gain of the selected input.
- [**F7**] – 48V On/Off for the selected input.
- [**F8**] – Mute/Unmute for the selected output.

All other grid displays (Link, Relax, Paste, etc.) operate in a similar manner. Use the Index on Page 523 to locate a topic.

Adjusting Mix Parameters

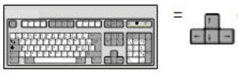
The Main Mix display is your mix! This means you can configure fader levels, mutes, routing, EQ, Dynamics, Effects, etc. just as if you were sitting in front of the console, all using a keyboard and mouse.

For full details on this display, see Page 67. Here are a few tips when working with a mouse and keyboard:

1. Left-click on a fader to select a channel.

This is equivalent to pressing the **SEL** button on the console.

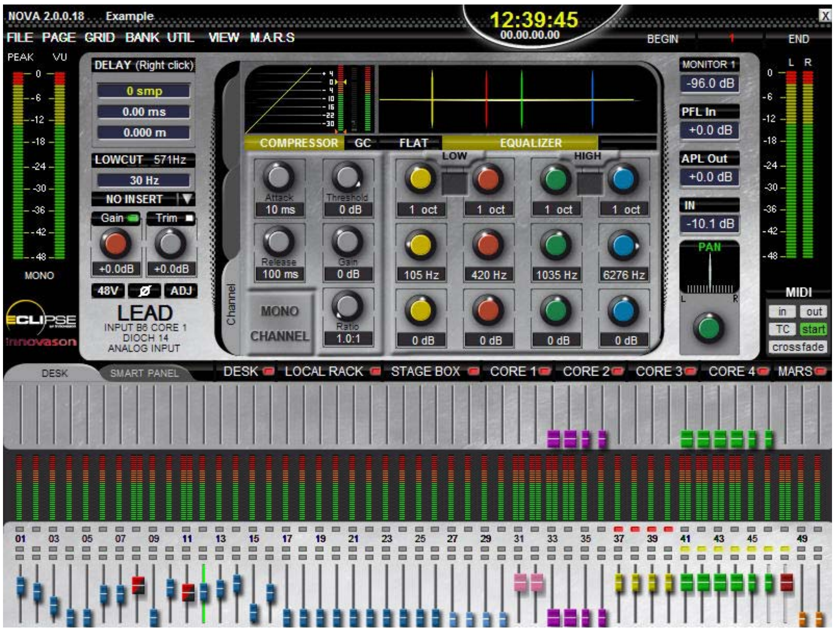
Moves the pointer or cursor



= on the keyboard

2. Or press the Left/Right arrow buttons on the keyboard to cursor left or right.

*The selected channel is shown with a green fader track – in our example, input Fader **12** is the selected channel:*

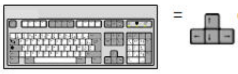


Remember that the faders are colour coded to help identify their type: blue faders are inputs, yellow faders are VCAs, etc. For a list ID colours, see Page 58.

3. Right-click and drag on a fader to change its level.

This is equivalent to moving a fader on the console.

Moves the pointer or cursor

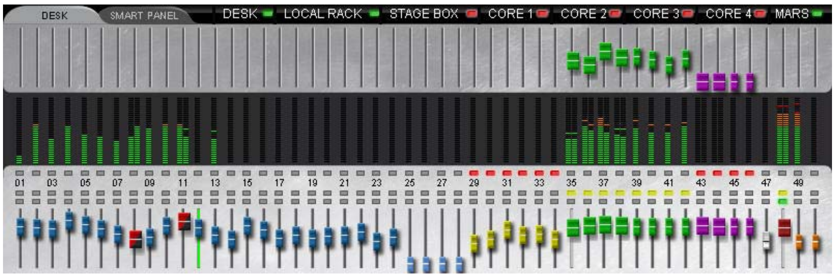


= on the keyboard

If you need finer control, select the channel, and press the Up/Down arrow buttons on the keyboard.

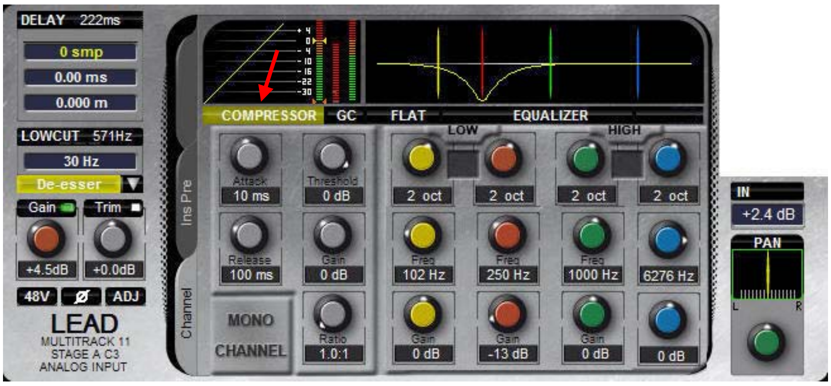
Note that because you can see both main and send levels on the Nova display, right-click and drag on the lower row to adjust main levels, and upper row to adjust send levels. There is no need for different fader modes as used on the console surface. See Page 74 for more details.

4. To change the routing to or from a channel, select it, and then use the yellow row of buttons to make assignments:



Just as on the console you can select an input channel and route from it (Forward assign), or select an output channel and route to it (Reverse assign), see Page 74.

5. To control switched functions, such as Compressor On/Off, position the pointer over the button and left-click:

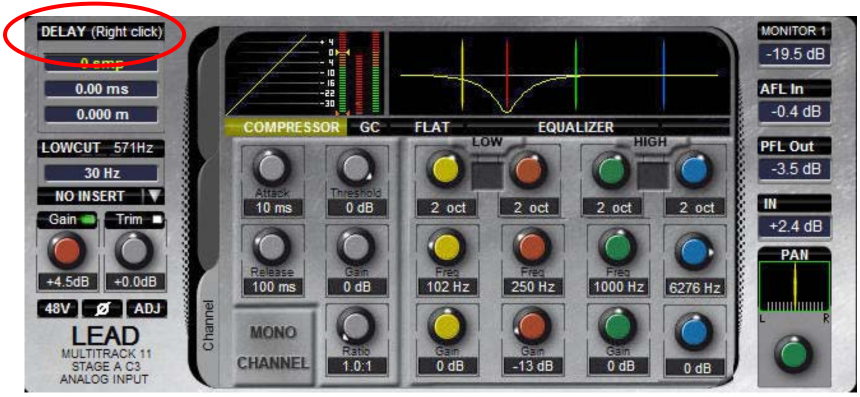


Some functions such as phantom power (48V) have a keyboard shortcut [**F7**]. For a full list of shortcuts, see Page 434.

6. To adjust on-screen rotary controls such as Compressor **Threshold**, position the pointer over the control and left-click to decrement or right-click to increment the value.

7. Sometimes the right-click button is required to access a particular function: for example, to assign a Delay to a channel.

In most instances, the screen text will guide you:



Chapter 10: M.A.R.S.

Introduction

M.A.R.S. (Multitrack Audio Recording System) is an integrated 64-track hard disk recorder which is fitted as standard to every **Eclipse** mixing console. A dedicated control panel under the console touch-screen provides rapid access to recording and playback functions. Additional functions are accessible from the touch-screen display.

M.A.R.S. is designed for recording and playing back audio in preparation for a live show or production. The most common application is to record the sound check so that it can be replayed later as a “virtual sound check”.

M.A.R.S. exists in its own right as a stand-alone hard disk recorder. When integrated into Eclipse, the system is known as **M.A.R.S.** (**M**ultitrack **A**udio **R**ecording **S**ystem). When used with other systems, the recorder is called **MT128**.

This chapter describes the operation of M.A.R.S. with Eclipse, and concentrates on common tasks such as recording and playing back a sound check. For details on all the functions provided by the **MT128** recording system, please refer to the documentation provided at http://www.vb-audio.com

Overview

M.A.R.S. provides 64 tracks of hard disk recording and playback from a removable hard disk which slots into the rear panel of the Eclipse frame. The system is handled by a second computer which runs separately from Eclipse's **Nova** software.

To switch the console's touch-screen between the two control computers:

1. Press the **M.A.R.S.** or **NOVA** buttons on the TRANSPORT control panel:

- **NOVA** – accesses the Nova mix management software which controls the console and stores/recalls mix settings.
- **M.A.R.S.** – accesses the hard disk recorder displays. All audio recording is managed by the M.A.R.S. control computer. All audio files are stored on the M.A.R.S. hard disk which slots into the rear panel of the frame.

When working within the **M.A.R.S.** displays, all functions are selected either by touching an on-screen button, or using the trackball and keyboard. As most buttons are large, the quickest method of operation is to reach out and touch a button!

Tip

Connecting M.A.R.S.

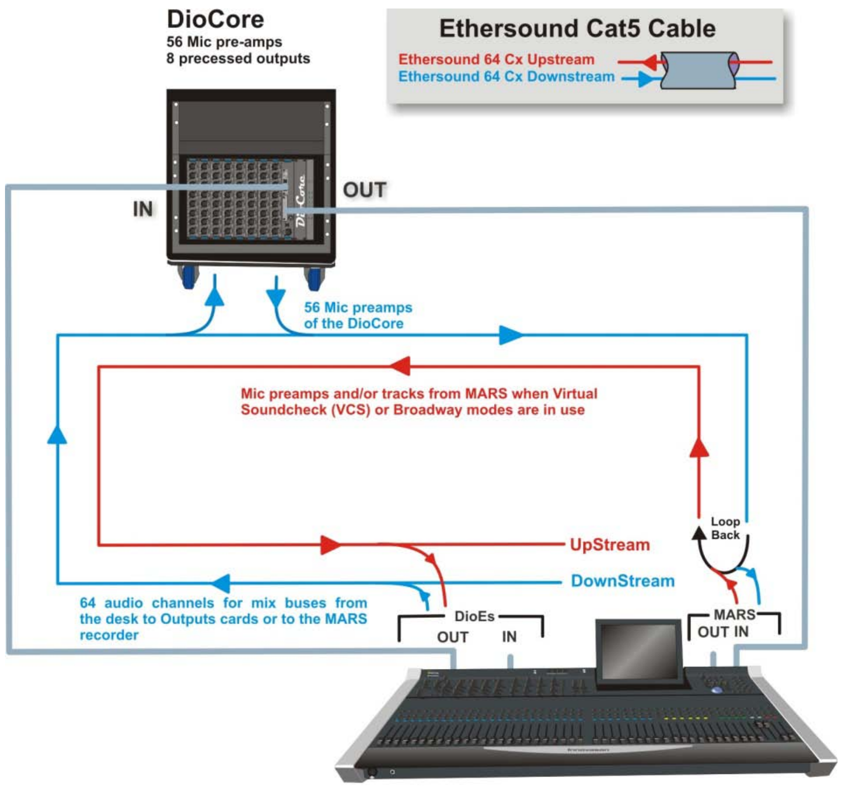
Please see Page 45 for details on connecting M.A.R.S. and checking the Ethersound communication.

Note that you can play back the demo song from M.A.R.S. without connecting the DioCore if you wish.

Note

Audio Routing

Audio is transferred to and from M.A.R.S. via Ethersound. The diagram below shows the Ethersound connections and audio streaming for a standard Eclipse configuration:


DioCore
56 Mic pre-amps
8 processed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
UpStream
DownStream
Loop Back
64 audio channels for mix buses from the desk to Outputs cards or to the MARS recorder
DioEs
OUT
IN
MARS
OUT IN

⏩ Recording

M.A.R.S. *always* records the downstream Ethersound channels it receives (shown in blue), with Ethersound channel 1 recorded to track 1, Ethersound channel 2 to track 2 and so on. With standard patching, the result is:

- **Tracks 1 to 56** = **DioCore Mic Inputs 1 to 56**
- **Tracks 57 to 64** = are freely available and can be used to record mix busses from the console.

Playback

In normal live operation, the upstream Ethersound channels to the console (shown in red) are fed from the DioCore (Mic inputs 1 to 56) – i.e. the Loop Back (in black) is active.

By enabling **VSC mode** (Virtual Sound Check), the DioCore mic inputs, are replaced by the corresponding M.A.R.S. tracks. This allows you to instantly switch between live mic inputs from the stage and M.A.R.S playback at the touch of a button.

Alternatively, using **BDWY mode** (Broadway), individual channels can be switched between the live mic and replay track using the console's **CUE** buttons. This is great if, for example, the drummer is late for the rehearsal and you have him pre-recorded!

Note

Note that when your Ethersound network consists of more than one Eclipse, you can connect the Ethersound network in different ways. See Page 263 for more details.

Patching

Mic preamps should be patched *downstream* onto Ethersound channels 1 to 57 (use the **PATCH INPUT** display – **DIO1** and **Core 1** tabs, see Page 268).

Ethersound channels should be patched *upstream* to the console's Faders or Smart Panel controllers (use the **PATCH INPUT** display – **DIO1** and **PATCH** tabs, see Page 235).

Mix busses from the console can be patched *downstream* so that they will reach the DioCore or M.A.R.S (use the **PATCH OUTPUT** display – **DIO1** and **PATCH** tabs, see Page 249).

Note that downstream channels 1 to 56 are replaced by mic preamps from the DioCore. So, if you wish to record a mix bus on M.A.R.S., patch downstream to channels 57 to 64.

Playing Back the Demo Project

To get started quickly with M.A.R.S. and Eclipse, every system is shipped with a demo song. This section describes how to play back the demo. To learn more about recording your own sound check, then please skip to Page 465.

To use the demo project, you must perform two operations:

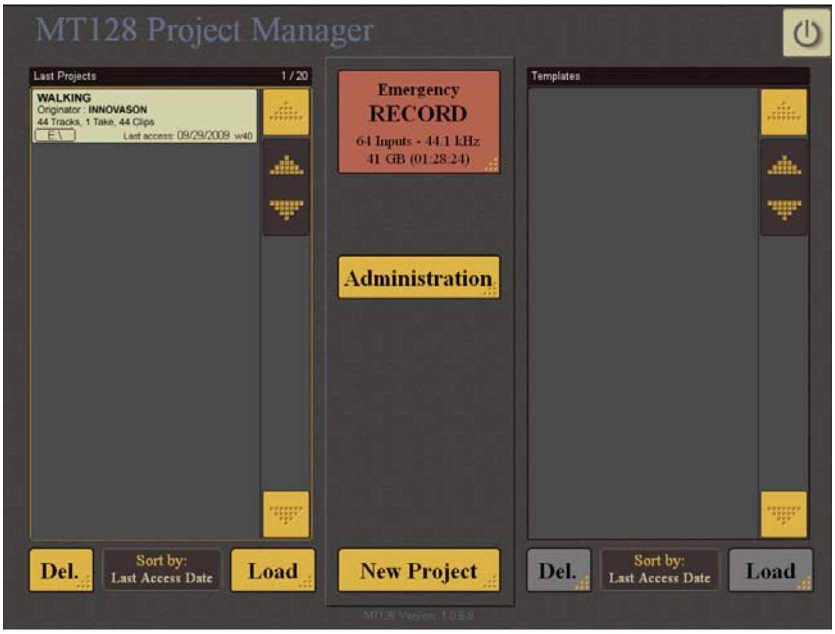
1. Open the M.A.R.S. project called “Walking” – this loads 64 tracks of pre-recorded audio onto the M.A.R.S. system.
2. Load the Nova file called “Walking” – this configures the console so that the demo (which is 44 tracks) will replay across pre-configured Fader strips, with user Labels and a mix to match.

Loading a Project in M.A.R.S.

M.A.R.S.
(TRANSPORT Panel)

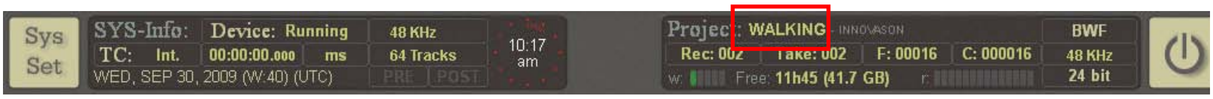
1. Press the **M.A.R.S.** button on the TRANSPORT panel to switch the touch-screen to the M.A.R.S. control computer.

If you have just started the system, then the **MT128 Project Manager** window is in view:

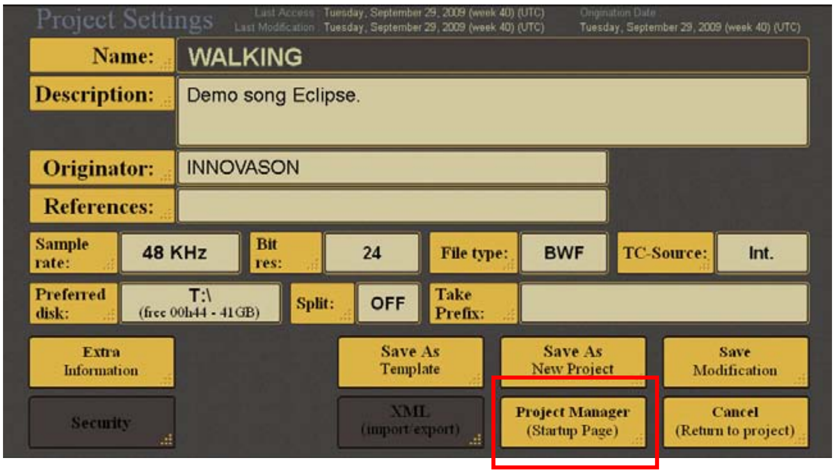


If you do not see this window, then a project has already been loaded or created. To return to the **MT128 Project Manager**:

2. Select the current Project name from the bar running across the top of the display – in our example, touch or click on **WALKING**:

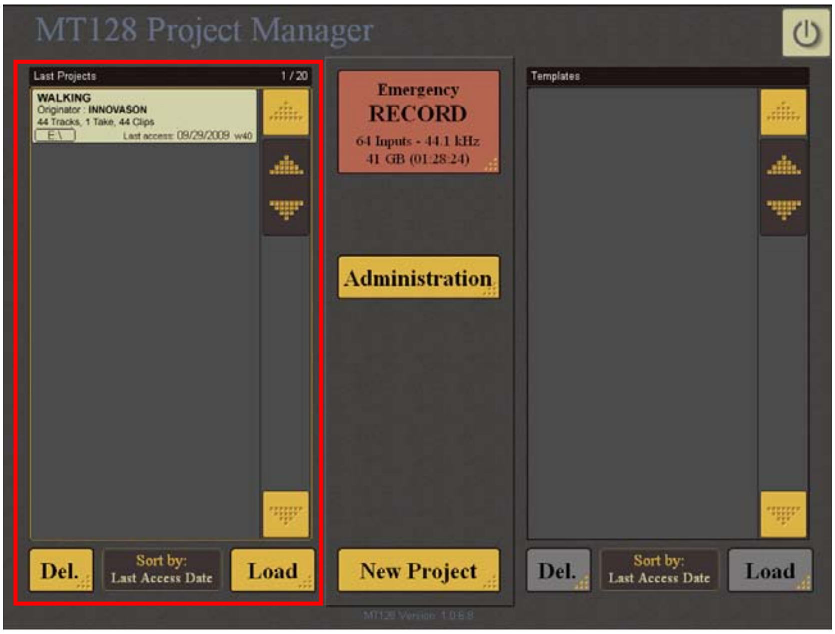


*This opens the **Project Settings** page:*


Project Settings
Last Access: Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification: Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date: Tuesday, September 29, 2009 (week 40) (UTC)
Name: WALKING
Description: Demo song Eclipse.
Originator: INNOVASON
References:
Sample rate: 48 KHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix:

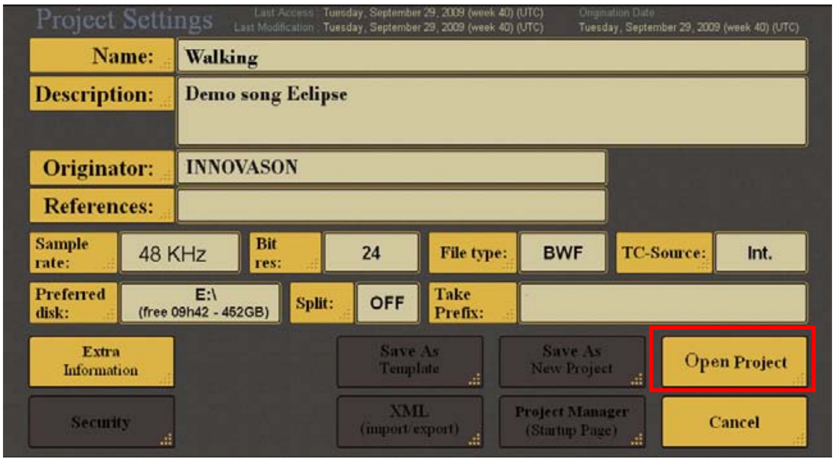
3. Select the **Project Manager (Startup Page)** button.

*The **MT128 Project Manager** opens.*


MT128 Project Manager
Last Projects 1 / 20
WALKING
Originator : INNOVASON
44 Tracks, 1 Take, 44 Clips
E:\ Last access: 09/29/2009 w40
Emergency RECORD
64 Inputs - 44.1 kHz
41 GB (01:28:24)
Templates

4. Select the project you wish to load from the **Last Projects** list on the left – e.g. “Walking”.
5. Then select **Load**.

*The **Project Settings** for “Walking” opens:*


Project Settings
Last Access : Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification : Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date
Tuesday, September 29, 2009 (week 40) (UTC)

Name: Walking
Description: Demo song Eclipse
Originator: INNOVASON
References:
Sample rate: 48 KHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: E:\ (free 09h42 - 452GB)
Split: OFF
Take Prefix:

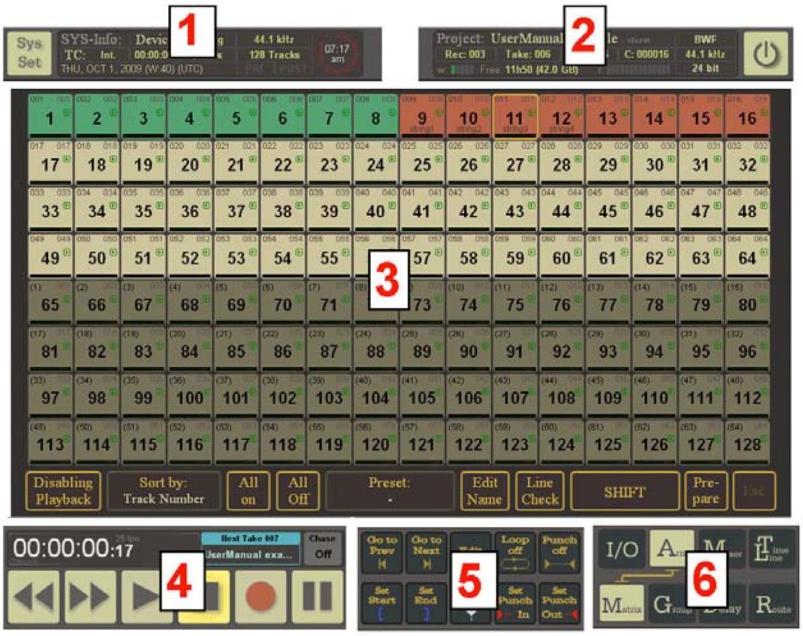
Note

This page provides more information about the selected project – for example, the sample rate, bit rate, file type, etc.

Note that you at this stage, you have not loaded any audio!

6. Select the **Open Project** button to open the project.

The details of the project are checked, the audio files are loaded and the current project window opens:



If the project has loaded correctly:

- In the **SYS-Info** area (1), you should see **Device: Running**. This indicates that M.A.R.S. is ready.
- In the **Project** info area (2), you should see the name of the loaded project – e.g. **Walking**.
- The M.A.R.S. touch-screen transport controls (4) should be lit to show that they are now active.

Note that the main part of the display (3) varies depending on the Page selection (6). For more details see Page 487.

Loading a File in Nova

NOVA

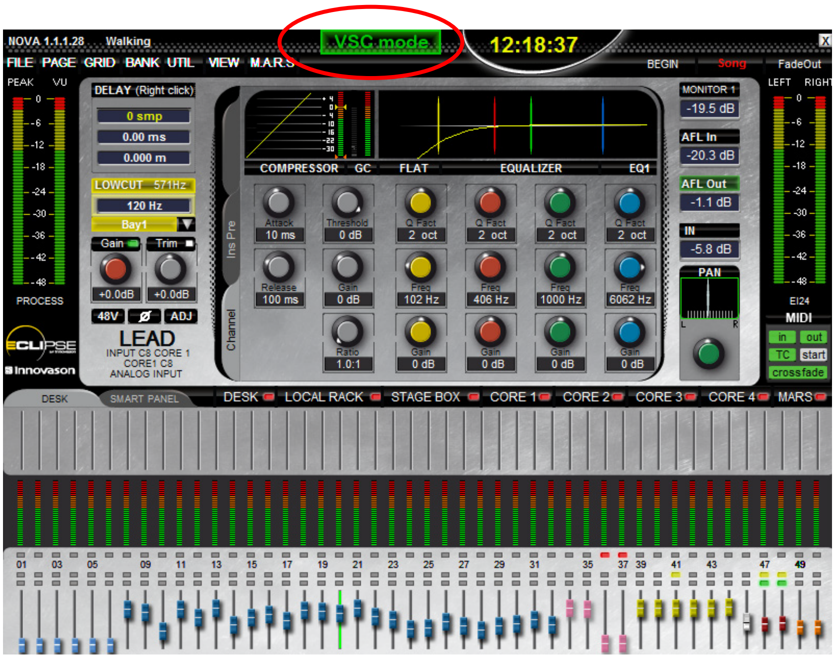
(TRANSPORT Panel)

1. Press the **NOVA** button on the TRANSPORT panel to switch back to the Nova control computer.
2. Select "**File** -> **Load**" from the main menus.
3. And load the demo file called **Walking**.

You can find more details on loading Nova Files in Chapter 7.

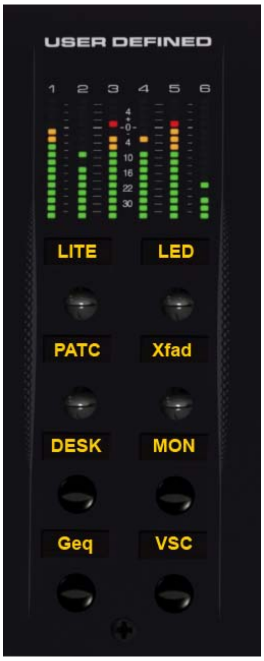
Look across the console, and you will see that each fader is now labelled according to the tracks of the demo project. Notice that some input faders (blue IDs) are Smart VCAs, while others are dedicated inputs. Notice that some Groups (pink IDs), VCAs (yellow IDs) and mix Masters (red IDs) have also been configured.

4. Check that Eclipse is running in **VSC mode** (Virtual Sound Check) at the top of the Main Mix display:



This mode switches the channels to receive audio from M.A.R.S. (tracks 1 to 64), instead of the DioCore mic inputs.

VSC mode should have been recalled by the Nova File "Walking", but if not:



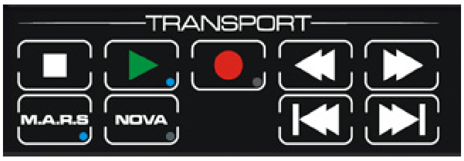
5. Press the **VSC** button (on the USER DEFINED panel, if configured) or select "**M.A.R.S. -> Virtual Soundcheck**" from the Nova main menus.

A confirmation pop-up appears.

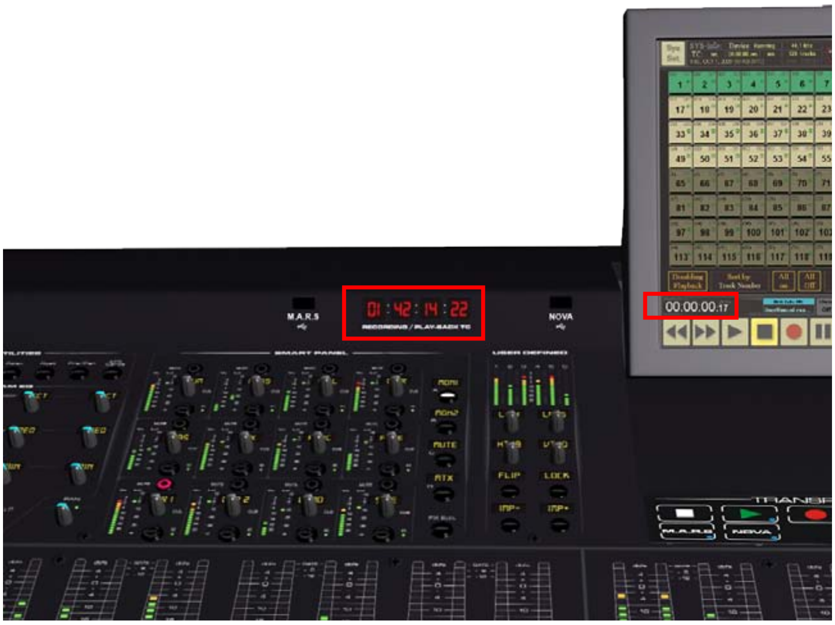
6. Press **OK** to confirm.

Playing Back the Demo

1. Test the audio playback by pressing the **Play** button on either the Eclipse TRANSPORT panel or M.A.R.S. touch-screen.

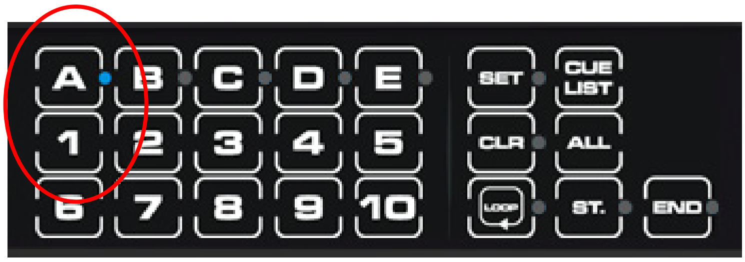


The Play button lights, and you will see timecode running both on the Eclipse front panel display and M.A.R.S. touch-screen if it is in view:



The demo song "Walking" starts at 00:00:00:00 so you should now be hearing audio.

2. Press **Stop**, either on the TRANSPORT panel or M.A.R.S. touch-screen to stop the play back.
3. To locate back to the start of the song, use the Nova cue memories on the TRANSPORT panel – press **A** followed by cue memory **1**:



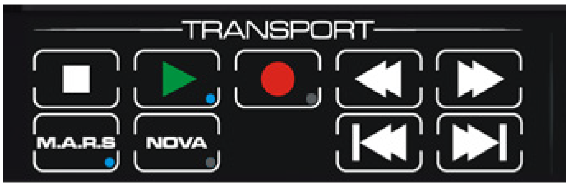
The timecode should locate to 00:00:00:00.

Transport Control

Once a project has been loaded, or a new project created, M.A.R.S. can be controlled using the transport buttons on the Eclipse TRANSPORT control panel, or the M.A.R.S. touch-screen display.

The Eclipse TRANSPORT Panel

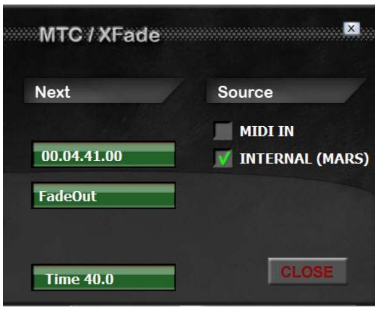
The dedicated TRANSPORT buttons may be used while viewing any NOVA or M.A.R.S. touch-screen display:



1. Press **Play** to replay audio from the current timecode position.

Timecode is displayed on the Eclipse front panel and Main Mix display:

Note that this display can be switched between Internal (M.A.R.S.) and MIDI timecode from Nova's MTC/Xfade window, see Page 499 for details.



00.04.41.00
FadeOut
Time 40.0
☐ MIDI IN
☑ INTERNAL (MARS)

2. Whilst in Play, press the **Play** button again to pause the playback.

The green LED on the button flashes when M.A.R.S. is paused.

3. Press **Stop** to stop playback.
4. Press **Rewind** or **Fast Forward** to run the audio backwards or forwards at different speeds:

- On the first press, audio runs at 0.5 x normal speed.
- On the second press, audio runs at 1.5 x normal speed.
- On the third press, audio runs at 2.5 x normal speed.

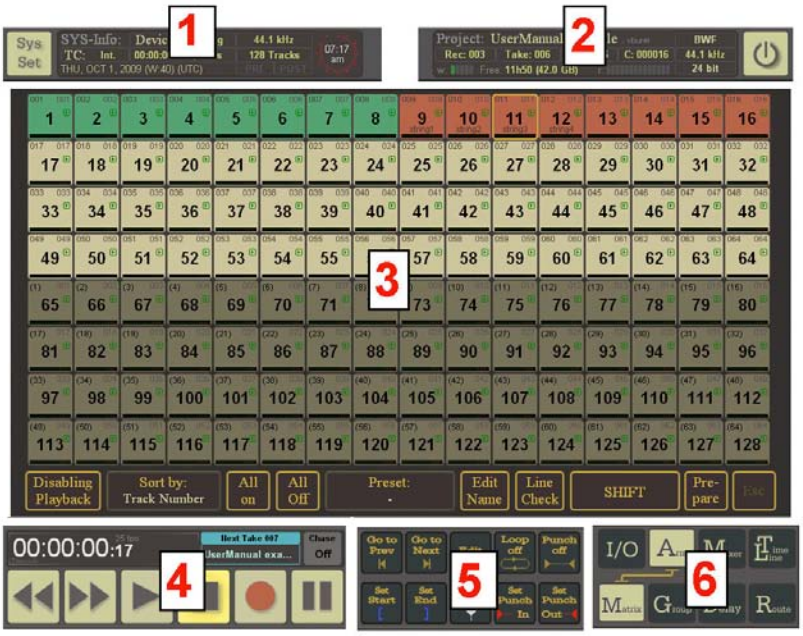
Note that these speeds can be adjusted from M.A.R.S. Please see the MT128 documentation at www.vb-audio.com for details.

5. Press **Play** twice to cancel and return to normal playback.

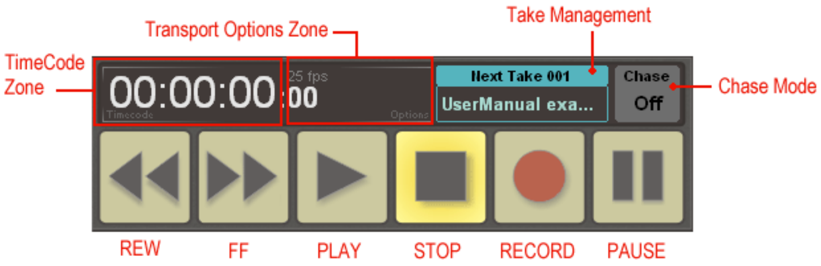
For details on Recording, please see Page 465.

Touch-screen Transport Control from M.A.R.S.

Transport control is also available from touch-screen buttons within the M.A.R.S. displays (4):



These buttons work in parallel with those on the TRANSPORT front panel. Here is an overview of their operation:

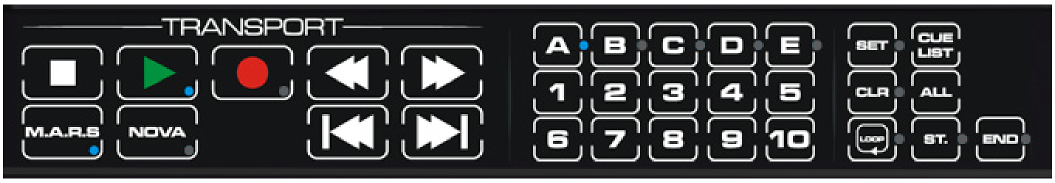


For more details, please refer to the **MT128** documentation at www.vb-audio.com

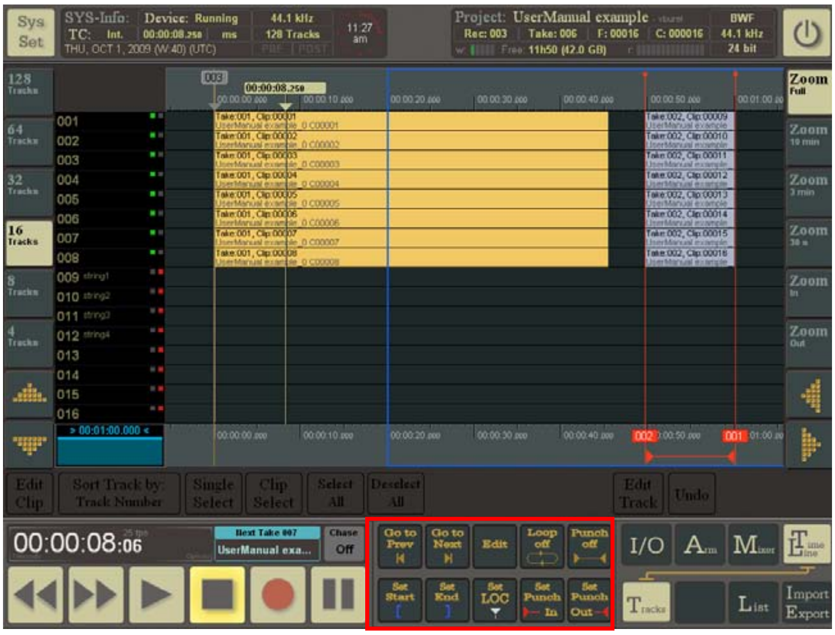
Cues

To locate to different points within the audio project, you can either:

- Create Cue points using the Nova Cue List and TRANSPORT front panel:



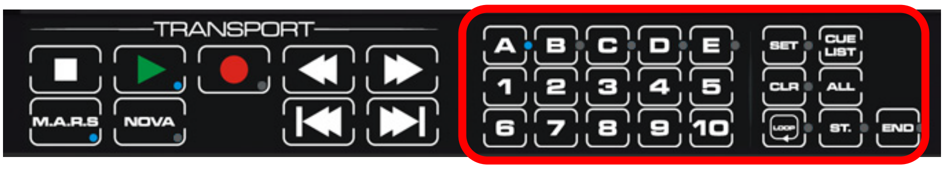
- Or create and recall Markers from the M.A.R.S. touch-screen displays:



Note that the two systems are independent; you cannot recall Nova cues from M.A.R.S. or M.A.R.S. markers from the Eclipse front panel. Therefore we are going to concentrate on the Nova Cue List, as this can be used while viewing any NOVA or M.A.R.S. display.

The Eclipse Cue List

Eclipse's Nova software includes a Cue List which is controlled from the TRANSPORT panel:



Cues are arranged in five banks (**A** to **E**) of 10 cues (**1** to **10**) providing a total of 50 cue memories.

Storing Cues

Cue points can be stored in Stop or in Play.

1. Press **SET**.

The button flashes (green).

2. Select a bank – e.g. press **A**.

The button lights (green).

Note that a bank must be selected (lit) before you can choose a number

3. Select a number – e.g. press **1**.

The current timecode is stored in cue memory A1. This is confirmed by a temporary pop-up which appears on the Nova display.

Note

Note that if the cue memory has already been used, you will be asked if you wish to replace it.

4. Select **OK** to overwrite an existing cue memory or **Cancel** to quit the operation.

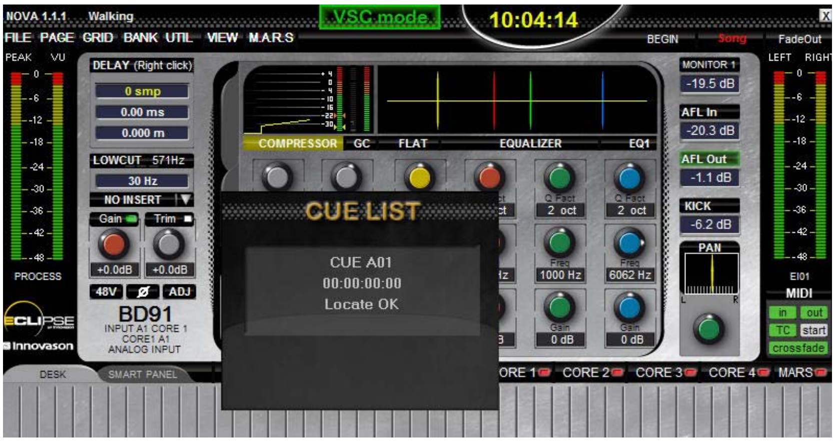
Note that if timecode is moving when you store a cue, the timecode is captured at the point when you choose the memory number (in step 3).

Recalling Cues

Having stored a cue, it can be recalled while in Stop or in Play:

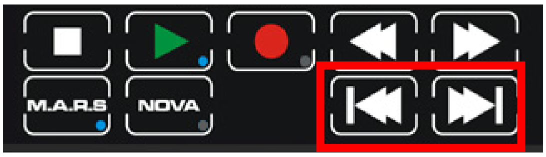
1. Press the bank and number of the cue – e.g. **A** and **1**.

The cue point is recalled and timecode instantly moves to the stored value; a confirmation pop-up appears on the Nova display:


NOVA 1.1.1 Walking
VSC mode
10:04:14
FILE PAGE GRID BANK UTIL VIEW M.A.R.S
BEGIN
Song
FadeOut
COMPRESSOR GC FLAT EQUALIZER EQ1
BD91
DESK
SMART PANEL
CORE 1 CORE 2 CORE 3 CORE 4 MARS
CUE LIST

CUE A01
00:00:00:00
Locate OK

Alternatively, you can use the Next and Previous Cue buttons on the TRANSPORT panel:



2. Press the **Next Cue** button to step forward to the next cue point.
3. Press the **Previous Cue** button to step back.

Note

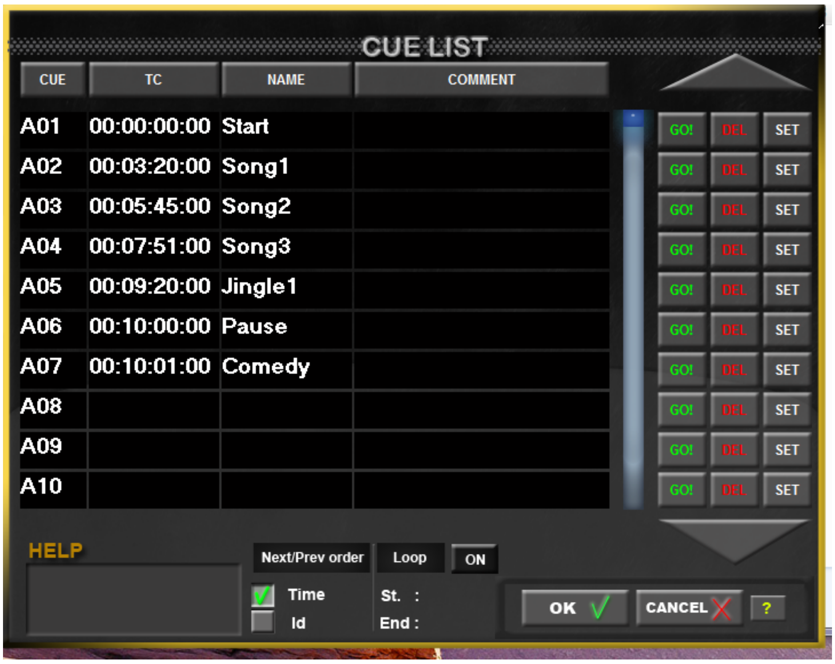
Note that the next/previous order can be set either to step to the next timecode value, or to the next cue ID number. This option is set from the Cue List (see the next page).

The Cue List Window

You can view and edit all the cues stored by Eclipse from the **Cue List** window:

1. Press the **CUE LIST** button on the TRANSPORT panel.

The CUE LIST opens and shows the Cue ID, timecode value, name and any comments for each memory location:



CUE	TC	NAME	COMMENT
A01	00:00:00:00	Start	
A02	00:03:20:00	Song1	
A03	00:05:45:00	Song2	
A04	00:07:51:00	Song3	
A05	00:09:20:00	Jingle1	
A06	00:10:00:00	Pause	
A07	00:10:01:00	Comedy	
A08			
A09			
A10			

☑ Time
☐ Id

2. Press the **A**, **B**, **C**, **D** or **E** buttons on the TRANSPORT panel to switch the cue list between banks.
3. Touch a **SET** button on the right of the window to instantly store a cue memory.
4. Touch a **GO!** button to instantly recall a cue memory.
5. Touch or select the **CUE**, **TC**, **NAME** or **COMMENT** column titles to order the cue list by ID, timecode, name or comment.

⏩ Naming or Adding Comments

1. Touch or click on the **NAME** or **COMMENT** column entry to enter a name or add a comment:

A cursor flashes within the entry box.

2. Type in your text.
3. Press [**Enter**] to confirm.

Editing a Cue Point

You can enter a specific timecode value for a cue memory as follows:

1. Touch or click on the **TC** column entry.

The timecode value is highlighted.

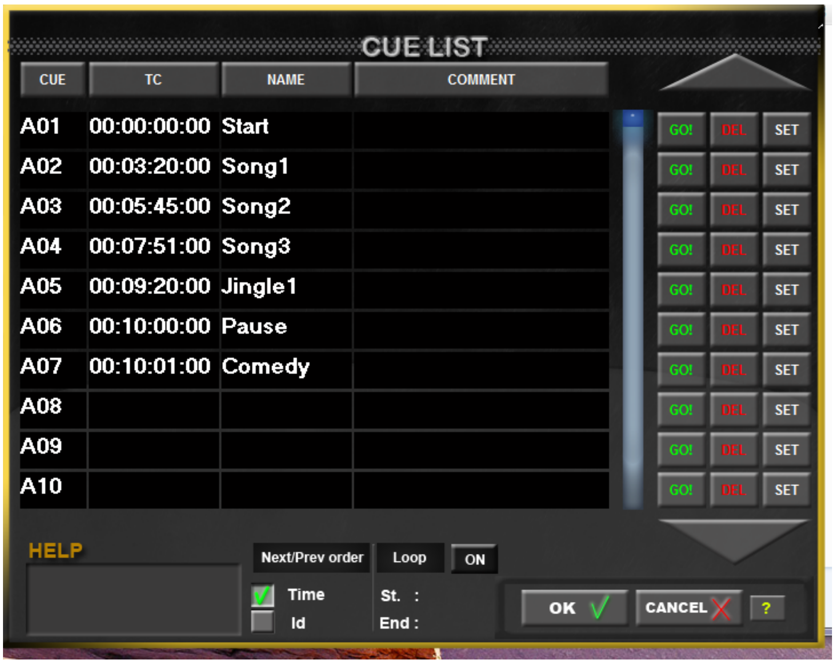
2. Type in the timecode value using the console keyboard.

For example, to enter a time of 1 minute, type **00:01:00:00**.

3. Press [**Enter**] to confirm.

Setting the Next/Previous Cue Order

1. At the bottom of the CUE LIST window, you can set the Next Prev Mode to either **Time** or **Id**:



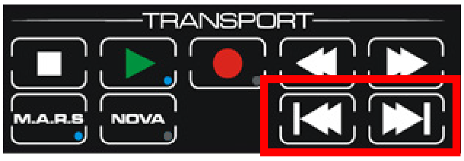
CUE LIST

CUE	TC	NAME	COMMENT
A01	00:00:00:00	Start	
A02	00:03:20:00	Song1	
A03	00:05:45:00	Song2	
A04	00:07:51:00	Song3	
A05	00:09:20:00	Jingle1	
A06	00:10:00:00	Pause	
A07	00:10:01:00	Comedy	
A08			
A09			
A10			

Next/Prev order
☑ Time
☐ Id

Loop ON
St. :
End :

This determines how the Next and Previous cue buttons on the TRANSPORT panel operate:

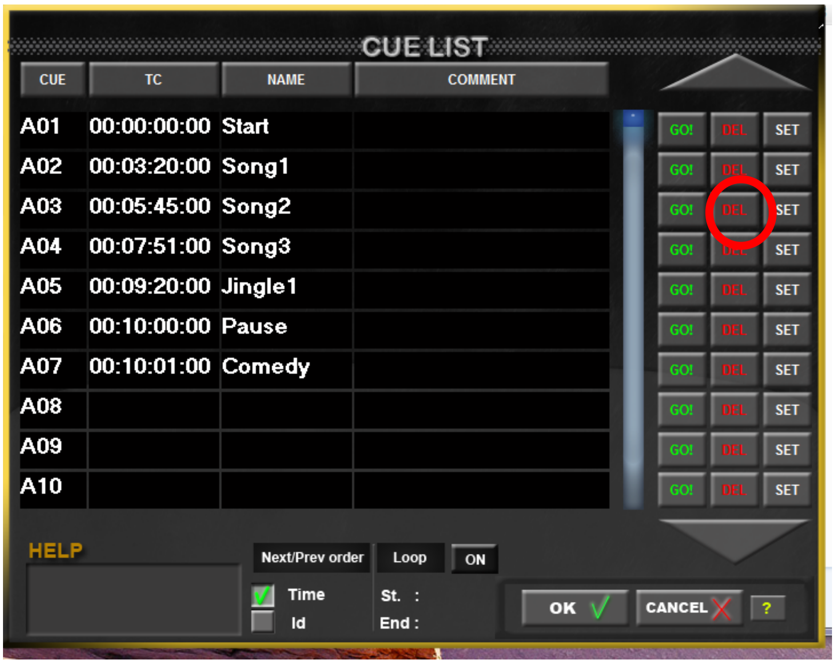


- **Time** – the Next and Previous buttons step through cue memories according to their timecode value.
- **Id** - the Next and Previous buttons step through cues according to their ID number.

Clearing Cues

With the CUE LIST window open:

1. Touch the on-screen **DEL** button to clear the cue memory:

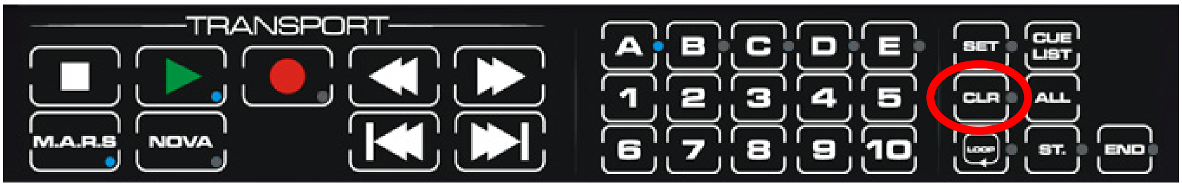


CUE	TC	NAME	COMMENT
A01	00:00:00:00	Start	
A02	00:03:20:00	Song1	
A03	00:05:45:00	Song2	
A04	00:07:51:00	Song3	
A05	00:09:20:00	Jingle1	
A06	00:10:00:00	Pause	
A07	00:10:01:00	Comedy	
A08			
A09			
A10			

2. Select **OK** to confirm.

Alternatively:

3. Press the **CLR** button on the TRANSPORT panel:



The button LED flashes (red).

4. Select the bank and the cue number you wish to clear – e.g. press **A** and **1**:
5. Select **OK** to confirm.

Clearing All Cues

To clear all cue memories:

1. Press and hold the **ALL** button and then press **CLR** on the TRANSPORT panel.

A confirmation pop-up appears on the Nova display asking if you wish to clear all cues.

Note

Note that this will clear all 50 cue memories, and there is no undo, so make sure you are absolutely sure before confirming!

2. Select **OK** to confirm.

Setting a Loop

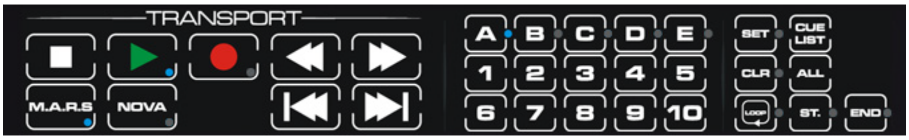
You can set the playback to loop, or cycle, between two cue points.

Tip

Note that you must use cue memories to set the start and end timecodes for the loop, so first store the start and end timecode values into two empty memories. It is a good idea to reserve a bank of cues (e.g. Bank E) for this purpose. This way you can easily return to any previous loop.

You can prepare the loop while in Stop or in Play:

1. Press the **ST.** button on the TRANSPORT panel:



The button LED flashes (yellow).

2. Select the cue memory for the start of the loop – e.g. press **E** and **1**.

*A confirmation pop-up appears temporarily on the Nova display showing that the loop start has been set, and the **ST.** button cancels.*

3. Next press the **END** button on the TRANSPORT panel.

The button LED flashes (yellow).

4. And, select the cue memory for the end of the loop – e.g. press **E** and **2**.

*A confirmation pop-up appears showing that the loop end has been set, and the **END** button cancels.*

5. Now locate to the start of the loop.
6. Select the **LOOP** button.

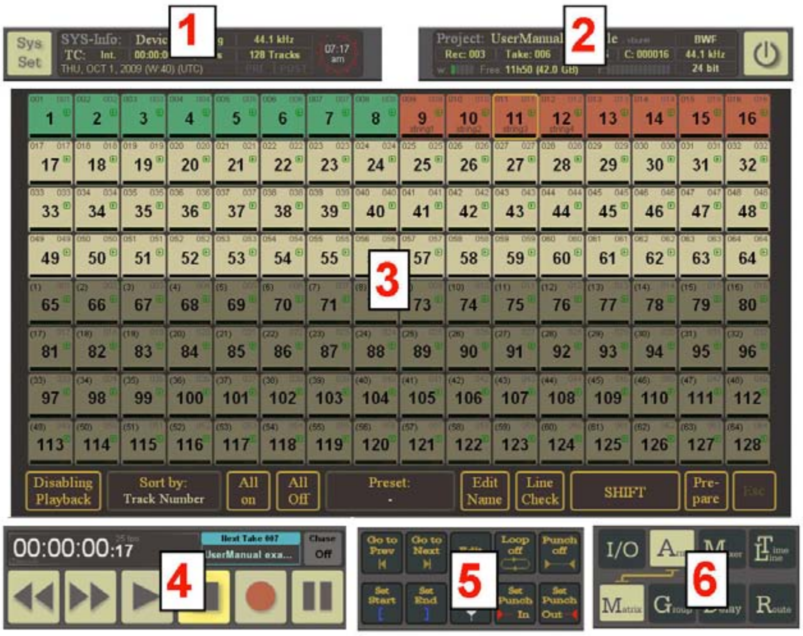
*When active, the **LOOP** button lights in blue.*

7. Press **Play**.

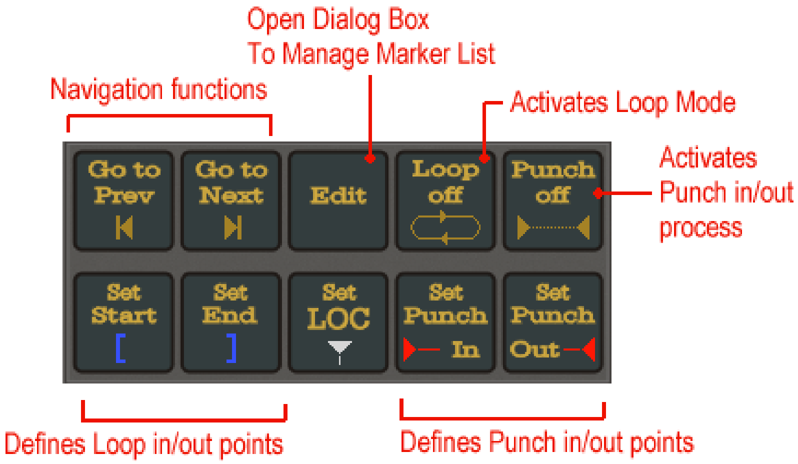
The system will now loop continuously between the start and end timecodes until you stop, deselect the **LOOP** button, or locate to a timecode value after the loop end timecode.

Touch-screen Marker Control from M.A.R.S.

Markers can be created and recalled from the M.A.R.S. touch-screen displays (5):

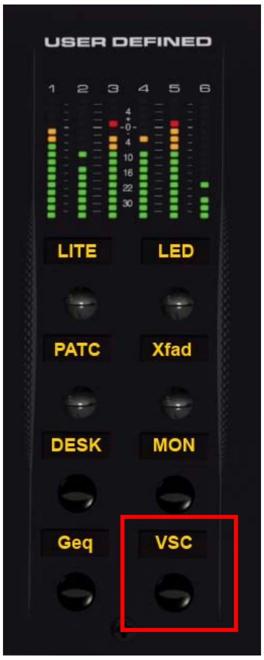


M.A.R.S. markers are independent from the Nova Cue List, and therefore can only be recalled from the M.A.R.S. touch-screen displays. Here is an overview of their operation:



For more details, please refer to the **MT128** documentation at http://www.vb-audio.com

VSC and Broadway Modes



M.A.R.S. is designed for recording and playing back audio in preparation for a live show or production. The most common application is to record the sound check so that it can be replayed later as a “virtual sound check”.

Eclipse provides two modes for virtual sound checking. You can switch the console into either mode using the **BDWY** or **VSC** buttons on the USER DEFINED PANEL, if configured. Or, from the Nova main menus (“**MARS -> Virtual Soundcheck**” or “**MARS -> Broadway**”).

⏩ Normal ‘Live’ Operation

When neither **VSC** or **BDWY** buttons are selected, the console is in its normal mode of operation and input faders receive the microphone signals from the DioCore on stage.

⏩ Virtual Sound Check Mode

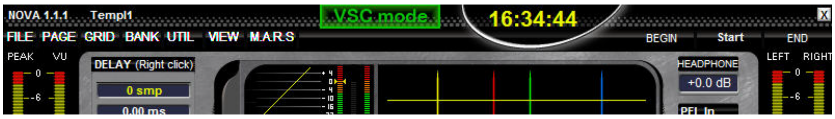
1. Press the **VSC** button on the USER DEFINED panel, or select “**MARS -> Virtual Soundcheck**” to switch to virtual sound check mode.

You will be asked for confirmation via an on-screen pop-up.

Note that if the touch-screen is switched to **M.A.R.S.**, then you will not see this confirmation pop-up. Switch back to the **NOVA** displays to view and confirm the mode change.

2. Select **OK** to confirm.

*Once enabled, you will see **VSC mode** at the top of the Main Mix display:*



Any faders which were patched from DioCore mic inputs are now re-patched from the corresponding tracks of M.A.R.S.

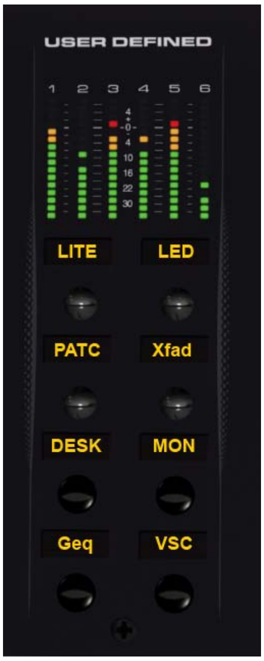
3. Locate to the start of your recording and press Play on the TRANSPORT panel to playback the pre-recorded sound check.
4. To return the console to its normal live mode of operation, deselect **VSC**.

Using VSC mode, you can switch between live mics (from the DioCore) and a recorded sound check (from M.A.R.S.).

Note

Note that the operation described above is based on a standard Eclipse configuration and standard patching. For more details on how audio is routed within the Ethersound network, see Page 446.

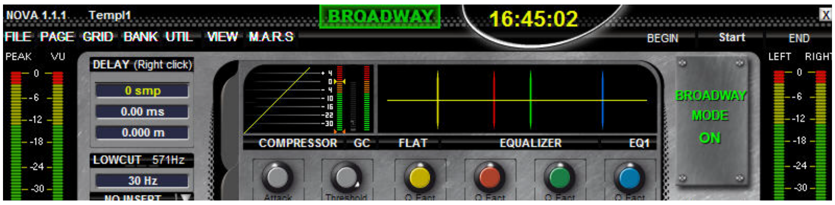
Broadway Mode



Broadway mode is very similar to VSC mode but instead of replacing all DioCore mic feeds with tracks from M.A.R.S., you can switch each input on an individual basis using its **CUE** button.

1. Press the **BDWY** button on the USER DEFINED panel, or select “**MARS -> Broadway**”, to switch to Broadway mode.

*Once enabled, you will see **BROADWAY** at the top of the Main Mix display:*



Input faders which have **CUE** buttons active are now fed from M.A.R.S., while other faders continue to receive mic inputs from the DioCore.

2. Enable the **CUE** buttons on the faders you wish to switch to M.A.R.S.

If you are in play and at the correct timecode, you should hear M.A.R.S. playback on these channels.

You can configure any combination of live mics and M.A.R.S. tracks using this mode – for example, the rest of the band can play along to pre-recorded drums.

Tip

You can also use the **CUE** buttons on VCA masters to switch a group of channels into replay.

3. To return the console to its normal live mode of operation, deselect **BDWY**.

Recording

Overview

M.A.R.S. can record up to 64 tracks onto a removable hard disk which slots into the M.A.R.S. computer fitted to the rear panel of the Eclipse frame.

M.A.R.S. is designed for recording continuous blocks of audio such as a live sound check. Therefore, its operation is simple and fast. Parameters such as the sample rate and bit resolution are fixed by the system and cannot be changed by the user. In addition, audio editing is not supported.

Audio can be recorded using any of the following file formats, allowing projects to be easily exported to other systems for editing, or for transfer to another Eclipse:

- **BWF** – Broadcast Wave File
- **AIF** – ideal for MAC-based audio applications.
- **WAV** – ideal for Windows-based audio applications.

M.A.R.S. is shipped with a single 500GB disk which can record for approximately 8 hours across all 64 tracks. Note that the exact amount of recording time is determined by the file format and the number of tracks in record. Should you need to purchase a spare disk for extra recorded material, any SATA hard disk can be used; the disk must be NTFS formatted.

Data Structure

M.A.R.S. calls its audio files Clips, and a number of Clips form a Take. For example, if you start recording at 00:00:00:00 across all 64 tracks and stop recording at 00:01:00:00 you will have created a single Take which contains 64 Clips each 1 minute in length.

All audio Clips and Take information are stored together within a single Project folder; each Project may create multiple Takes.

Tip

If you wish to transfer the recordings made on M.A.R.S. to another Eclipse, or to another system for editing, then create a new Project for each recording. Creating a Project creates a new folder on the M.A.R.S. hard disk, allowing you to easily export everything you need at a later date.

For more details on clips and takes please refer to the MT128 documentation at http://www.vb-audio.com

Your First Recording

To record to M.A.R.S., there are 3 basic operations you need to perform:

1. Create a new Project in M.A.R.S..
2. Arm the tracks you wish to record.
3. Start recording!

Note

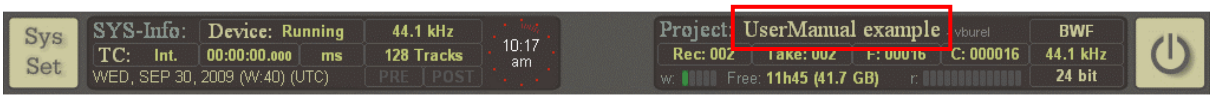
Note that once you have created a Project within M.A.R.S., everything you do is constantly saved by the system. Therefore, there is never any need to Save. When you load back a Project, it will always come back exactly as you last left it.

Creating a New Project

1. Press the **M.A.R.S.** button on the TRANSPORT panel to switch the touch-screen to the M.A.R.S. control computer.

Open the **MT128 Project Manager** window as follows:

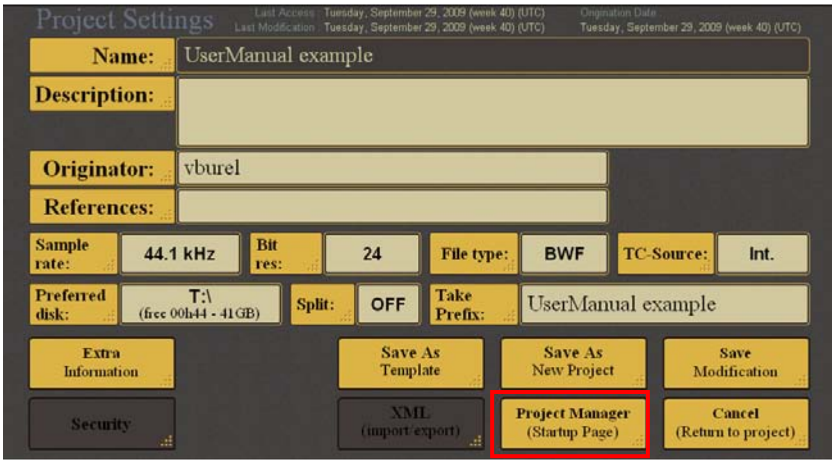
2. Select the current Project name from the bar running across the top of the display – in our example, touch or click on **UserManual example**:



SYS-Info: Device: Running 44.1 kHz
TC: Int. 00:00:00.000 ms 128 Tracks
WED, SEP 30, 2009 (W:40) (UTC)
10:17 am
Project: UserManual example vburel BWF
Rec: 002 Take: 002 F: 00016 C: 000016 44.1 kHz
w: Free: 11h45 (41.7 GB) r: 24 bit

*This opens the **Project Settings** window for the current project.*

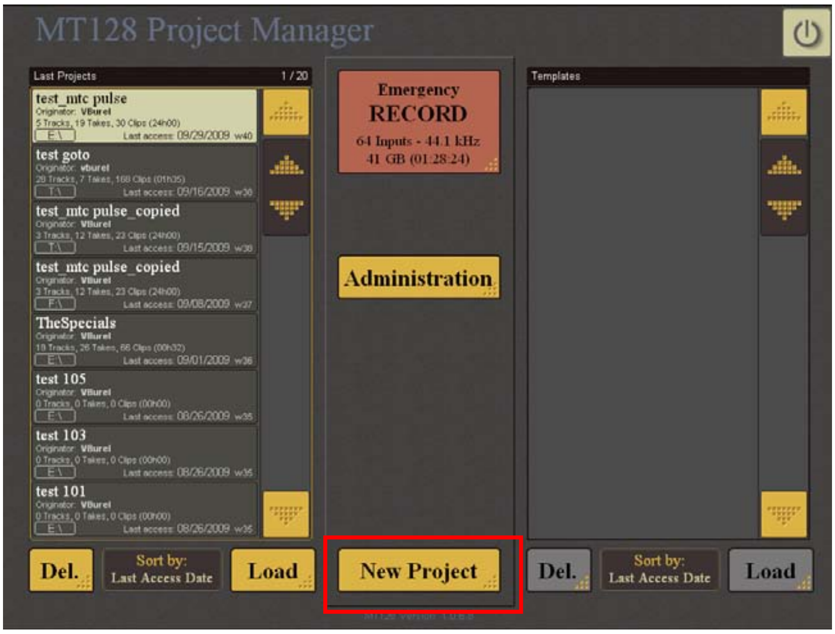
3. Then select **Project Manager (Startup Page):**



Project Settings
Last Access : Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification : Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date
Tuesday, September 29, 2009 (week 40) (UTC)

Name: UserManual example
Description:
Originator: vburel
References:
Sample rate: 44.1 kHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix: UserManual example

*The **MT128 Project Manager** window opens:*



test_mtc pulse
Originator: VBurel
5 Tracks, 19 Takes, 30 Clips (24h00)
E:\ Last access: 09/29/2009 w40

test goto
Originator: vburel
28 Tracks, 7 Takes, 168 Clips (01h35)
T:\ Last access: 09/16/2009 w38

test_mtc pulse_copied
Originator: VBurel
3 Tracks, 12 Takes, 23 Clips (24h00)
T:\ Last access: 09/15/2009 w38

test_mtc pulse_copied
Originator: VBurel
3 Tracks, 12 Takes, 23 Clips (24h00)
F:\ Last access: 09/08/2009 w37

TheSpecials
Originator: VBurel
18 Tracks, 26 Takes, 66 Clips (00h32)
E:\ Last access: 09/01/2009 w36

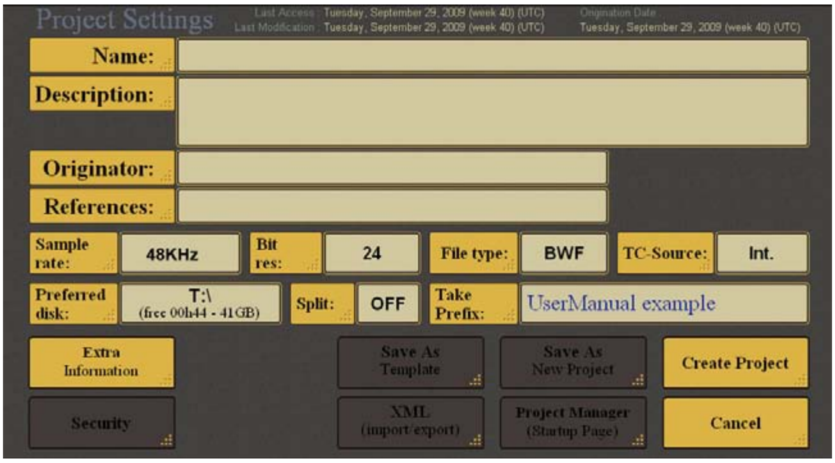
test 105
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 103
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 101
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

4. Select **New Project** from the bottom of the display.

*A new **Project Settings** window opens:*

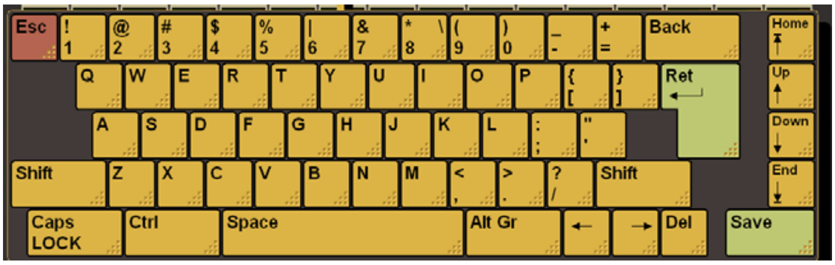


Last Access : Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification : Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date : Tuesday, September 29, 2009 (week 40) (UTC)

Sample rate: 48KHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix: UserManual example

5. Touch or click on the empty field beside **Name:** to enter a name for the M.A.R.S. Project.

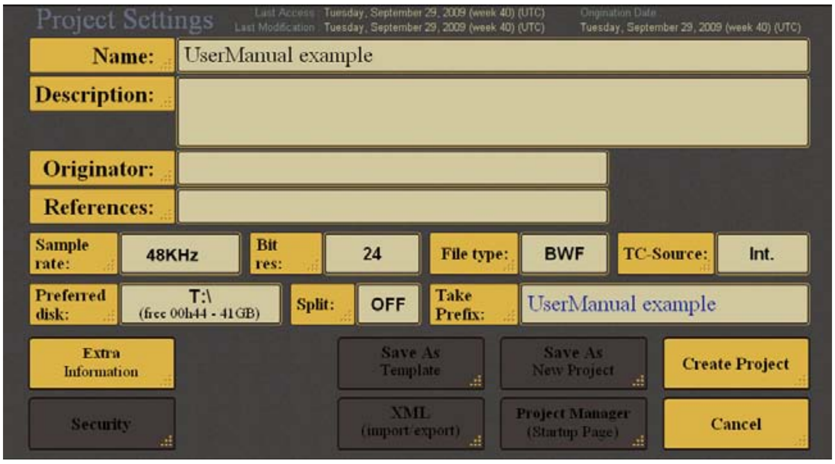
Whenever you need to enter text within M.A.R.S., an on-screen keyboard appears:



- Touch the on-screen buttons to type in a name, followed by **Save** to enter the data.

- Alternatively, once the on-screen keyboard is open, you can type a name using the console keyboard; press [**Enter**] to confirm the data.

In our example, we have entered **UserManual example**:



Project Settings

Last Access Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date Tuesday, September 29, 2009 (week 40) (UTC)

Name: UserManual example
Description:
Originator:
References:
Sample rate: 48KHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix: UserManual example

Note

Note that you *must* enter a name before you can create a new project.

All other fields are optional or can be left at their defaults. We are only going to describe the fields which are most useful for M.A.R.S. users. For full details on all the parameters within the **Project Settings** window, please refer to the MT128 documentation at http://www.vb-audio.com

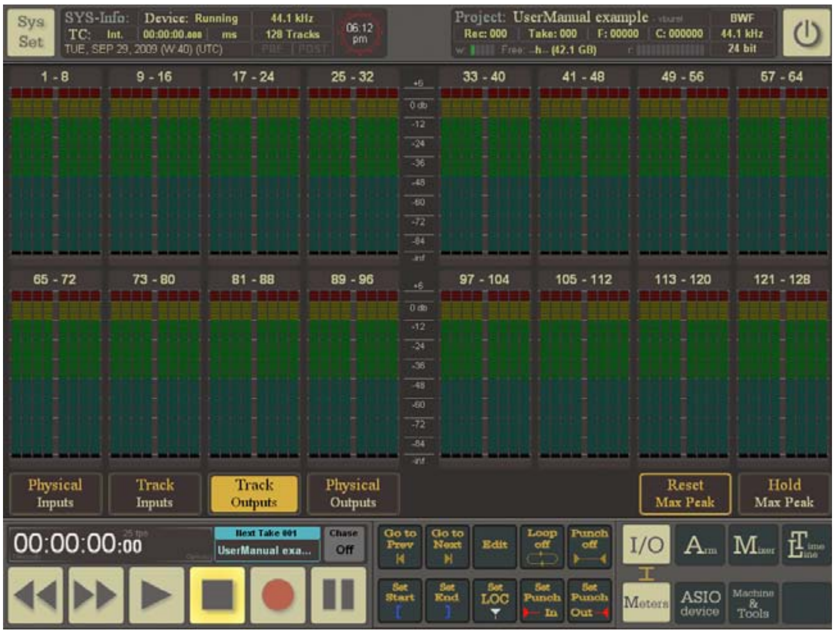
Useful fields or settings which you may are:

- **Description:** touch to enter a text description for the project.
- **File type:** touch to select a file type from:
    - **WAV** – ideal for Windows-based audio applications.
    - **BWF** – Broadcast Wave File (default)
    - **AIF** – ideal for MAC-based audio applications.
- **TC-Source:** touch to select a timecode reference. There are several options, but the useful ones for M.A.R.S. users are:
    - **Int.** – internal timecode (default)
    - **LTCi** – Linear timecode from an external input. Follow the instructions on Page 479 to select the LTC input.
    - **MTC1** – MIDI timecode from the MIDI input on the rear of the console. Follow the instructions on Page 479 to enable the MIDI timecode port.

Note that the **Preferred disk** field (which should always be set to disk **E:/**) shows the amount of free recording time, assuming you were to record continuously on all 64 tracks..

6. Once you have entered the Project name and set the other fields as you wish, touch **Create Project**.

*The new Project is created and M.A.R.S. opens the Current Project window on the **I/O** -> **Meters** page:*


SYS-Info: Device: Running
TC: Int. 00:00:00.000 ms
44.1 kHz
128 Tracks
TUE, SEP 29, 2009 (W 40) (UTC)
06:12 pm
Project: UserManual example
Rec: 000 Take: 000 F: 00000 C: 000000
Free: --h-- (42.1 GB)
BWF
44.1 kHz
24 bit
00:00:00:00
Next Take 001
UserManual exa...
Chase Off

In the background, M.A.R.S. has created a new folder (named after the Project title) where all your recorded audio clips will be stored.

At the top of the window you should see:

- In the **SYS-Info** area, **Device: Running** indicates that M.A.R.S. is ready.
- In the **Project** info area, you should see the name of the current project – e.g. **UserManual example**.

At the bottom of the window:

- The M.A.R.S. touch-screen transport controls should be lit to show that they are now active.

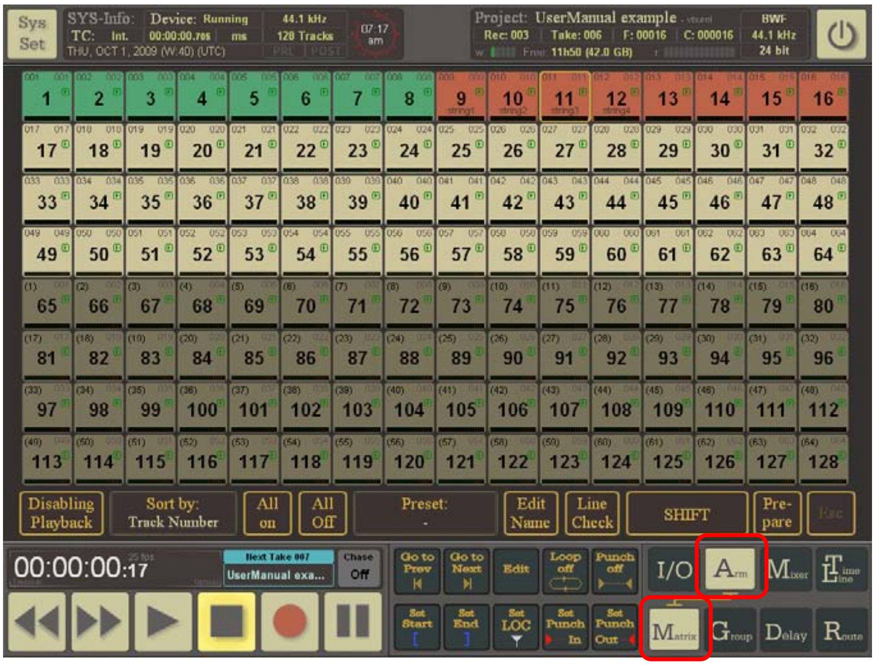
Note that the main part of the Current Project window varies depending on the Page selection. For more details see Page 487.

Track Arming

The next stage is to select which tracks you wish to record onto – you could choose all 64 tracks, or a subset.

1. Using the page select buttons at the bottom right of the display, select **Arm** and **Matrix**:

*The **Arm** -> **Matrix** page opens:*



On your system all 64 track buttons should be white. The colour of the track buttons indicates:

- **White** – no audio clips are present and the track is not armed.
- **Green** – at least one audio clip is present on the track.
- **Red** – the track is armed for recording.

In our example, audio is already present on tracks 1 to 8, tracks 9 to 16 are record armed, and tracks 17 to 64 are empty.

2. Touch each of the track buttons you wish to record arm.

The button turns red when it is armed.

3. Select **All on**, below the track buttons, to quickly enable record arming for all 64 tracks.

Note that when a track is record armed, it is automatically switched to monitor incoming audio. Therefore, if audio is present on the corresponding Ethersound channel, you will see the audio level in the meter below each track button.

Tip

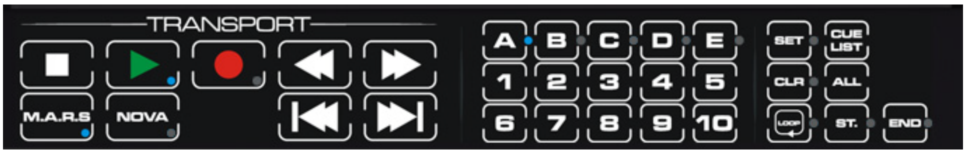
If you are going to export the recording to another system, then it is a good idea to Label the M.A.R.S. tracks now. This way the clip name will correspond to the track name. Eclipse provides a quick way of transferring Labels from the console to M.A.R.S., see Page 475 for details. If you do not care about naming, then continue to the next stage.

Recording

Having prepared the Project and armed the tracks, you can now start and stop recording from either the Eclipse TRANSPORT control panel or from the M.A.R.S. touch-screen.

So that you can return to the Nova displays during the sound check, use the Eclipse TRANSPORT control panel:

1. Locate to the desired start timecode by recalling a cue.
2. Then, on the TRANSPORT control panel, press both **Play** and **Record**:



Note that if you only press **Record**, you are in record ready, but timecode is paused until you press **Play**.

Note

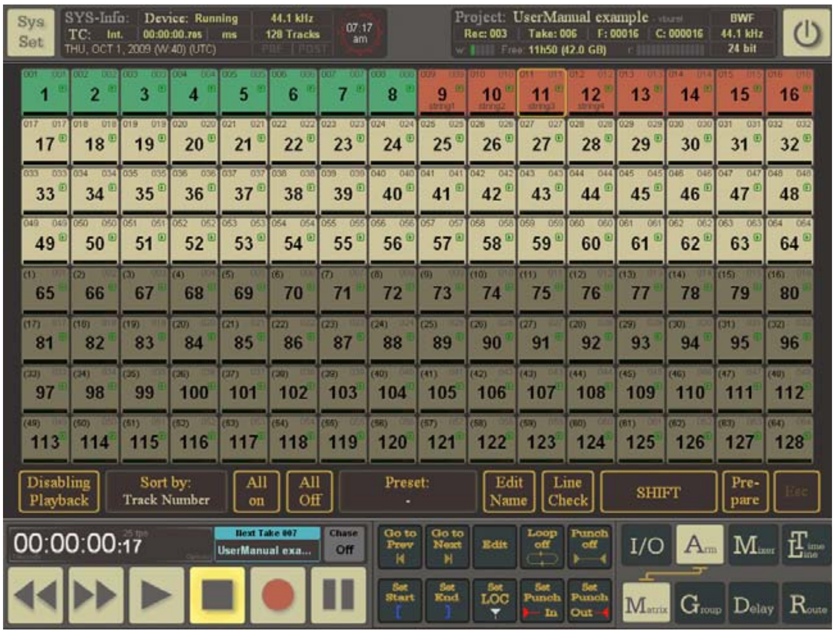
Once the recording begins, timecode will roll forwards and the **Play** and **Record** button LEDS light (green and red).

3. Use the Cue buttons to store cue memories as the sound check records.
4. At the end of the sound check, press **Stop**.

Playback

To play back the recording:

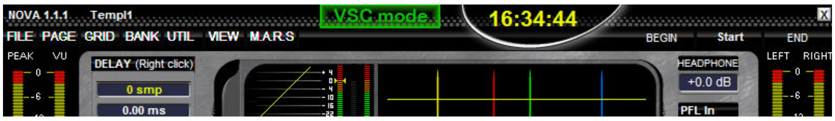
1. Return to the **M.A.R.S.** touch-screen displays, and select the **Arm -> Matrix** page:



2. Deselect the track arm buttons.
3. Select **All off** below the track buttons to quickly disable record arming for all 64 tracks.

This switches each track to replay; the track buttons should be green to indicate that audio clips are present.

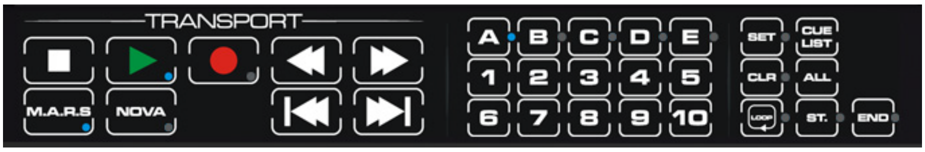
4. Return to the Nova Main Mix display, and select **VSC** mode:



Remember to confirm by pressing **OK**.

This switches the console's incoming Ethersound channels to receive audio from M.A.R.S...

5. Locate back to start timecode and press Play using the TRANSPORT control panel:



You should now be hearing your recording!

Note

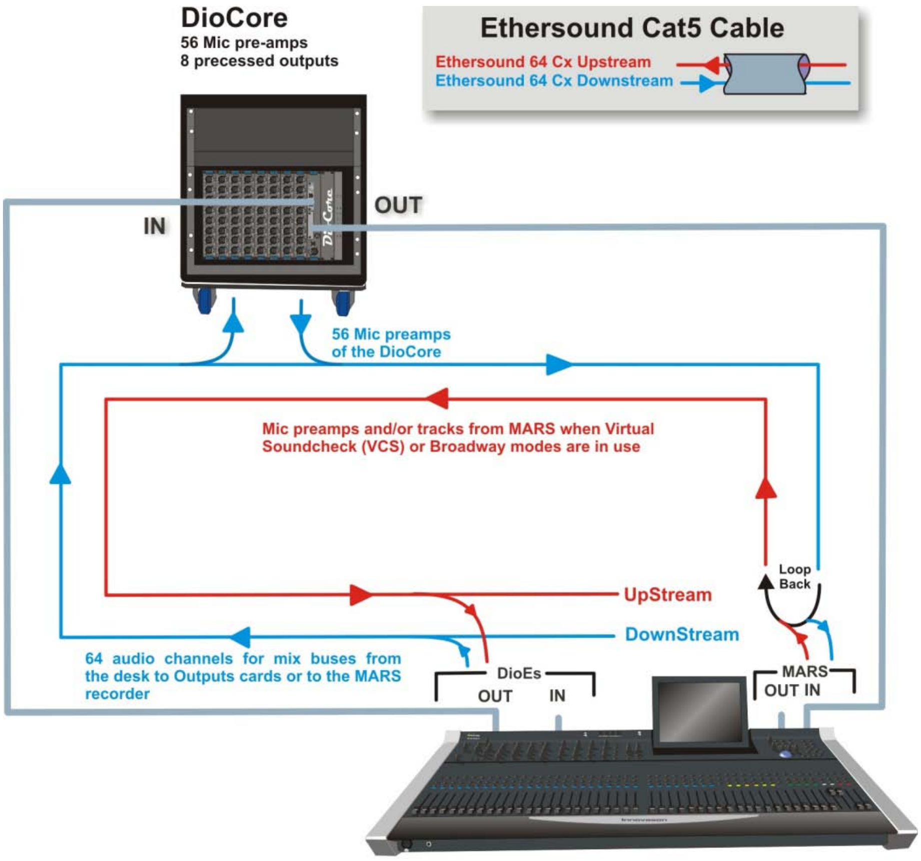
Note that there is no need to save the M.A.R.S. Project; when you shut down M.A.R.S. or load a different project, the current Project is automatically updated.

Advanced Functions

The previous section described how to make a simple recording for immediate replay. However, M.A.R.S. and Eclipse support a number of additional functions as follows:

Patching Ethersound Channels

A standard Eclipse system is shipped with one DioCore fitted with 56 microphone channels. The diagram below shows the audio streaming for a standard Eclipse configuration:


DioCore
56 Mic pre-amps
8 precessed outputs
Ethersound Cat5 Cable
Ethersound 64 Cx Upstream
Ethersound 64 Cx Downstream
IN
OUT
56 Mic preamps of the DioCore
Mic preamps and/or tracks from MARS when Virtual Soundcheck (VCS) or Broadway modes are in use
UpStream
DownStream
Loop Back
64 audio channels for mix buses from the desk to Outputs cards or to the MARS recorder
DioEs
OUT
IN
MARS
OUT IN

In this configuration M.A.R.S. records downstream Ethersound channels, with Ethersound channel 1 recorded to track 1, Ethersound channel 2 to track 2 and so on. With standard patching, the result is:

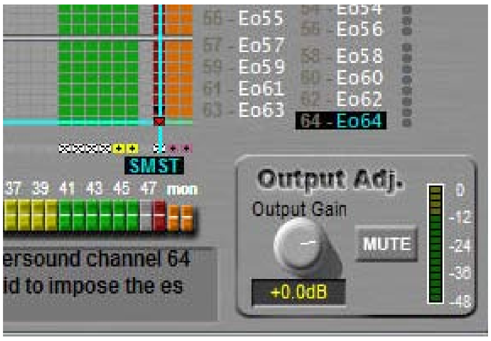
- **Tracks 1 to 56** = **DIO Mic Inputs 1 to 56**
- **Tracks 57 to 64** = free.

The following examples show how to patch the spare 8 channels. However, you could use this method to alter any Ethersound channel patching, and thereby route different signals to M.A.R.S.

1. From the **PATCH OUT** grid, patch the mix busses you want to record to Ethersound channels 57 to 64 (downstream).

ECLIPSE	**Patch OUT** **(UTILITIES)**
🖱	**"GRID -> Patch Output"**
⌨	**[F12]**

In our example, Master Left and Master Right are patched to Ethersound channels 63 and 64:



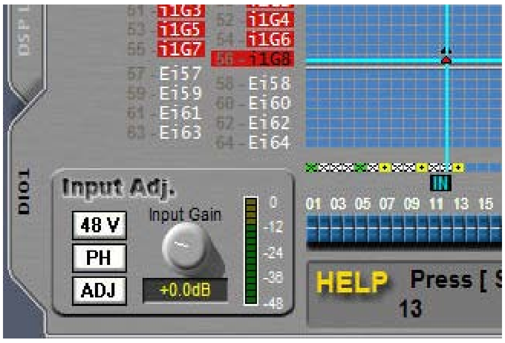
If you wish, you can Label the Ethersound channels, and use the **Tx Labels** button to transfer the Labels to M.A.R.S. See Page 475 for details.

2. Now track arm the tracks from the **Arm** -> **Matrix** page within M.A.R.S., and record in the usual manner.

To replay the tracks, they must be patched to input faders.

3. From the **PATCH IN** grid, patch Ethersound channels 63 and 64 (upstream) to a stereo input.

ECLIPSE	**Patch IN** **(UTILITIES)**
🖱	**"GRID -> Patch Input"**
⌨	**[F11]**



4. Make sure that you have disarmed the tracks in M.A.R.S. – the track buttons on the **Arm** -> **Matrix** page should be green.
5. Make sure Eclipse is switched to **VSC mode**.
6. Then play back the audio!

Transferring Labels from Eclipse to M.A.R.S.

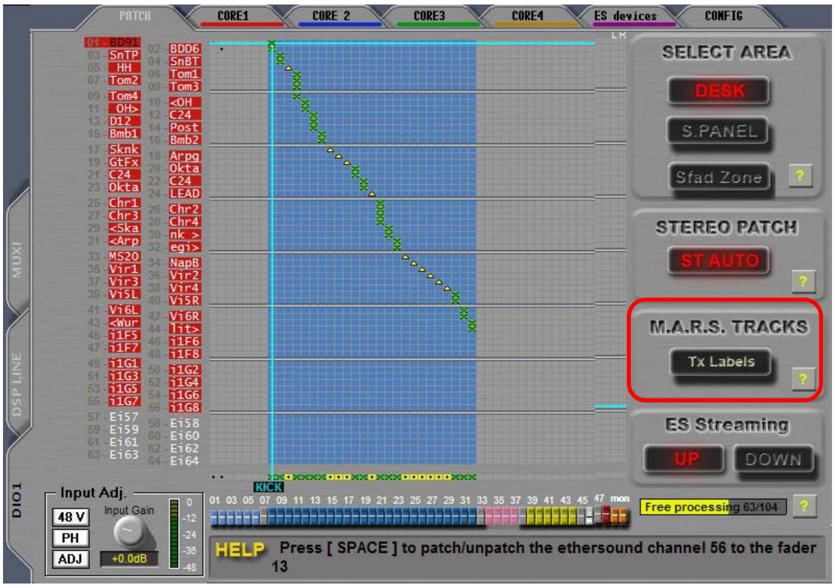
If you have labelled the DioCore mic inputs using the **PATCH** grids on Eclipse, then you can transfer these Labels to M.A.R.S. before you record. The advantage is that each audio clip will be labelled according to its source – e.g. kick, snare, HiHat, etc.

You can perform this operation from the **PATCH INPUT** or **PATCH OUTPUT** grid, depending on whether the Ethersound channel you are recording is upstream or downstream. In our example, let's transfer the Labels from the 56 DioCore microphone inputs:

1. Create a New Project on M.A.R.S.
2. Before you arm any tracks, return to the Nova displays.
3. Open the **PATCH INPUT** grid.
4. And select the **DIO1** and **PATCH** tabs.

ECLIPSE	**Patch IN (UTILITIES)**
	"GRID -> Patch Input"
	[F11]

The Labels running down the left of the display are the Labels entered for each mic input from the DioCore:



HELP Press [SPACE] to patch/unpatch the ethersound channel 56 to the fader 13

5. Select the **Tx Labels** button (below M.A.R.S. Tracks).
6. And exit the **PATCH INPUT** grid.
7. Return to the M.A.R.S. touch-screen displays – press **M.A.R.S.** on the TRANSPORT panel.
8. Select the **Arm**-> **Matrix** page.

Below each track number, you will see a track name in smaller lettering; these should match the Labels of your DioCore mics.

9. Now arm the tracks and make the recording.

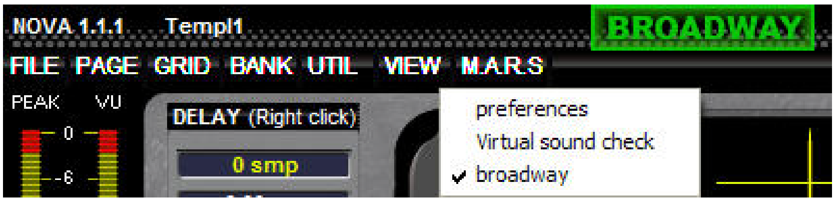
Each audio clip on M.A.R.S. now includes the transferred Label.

Note

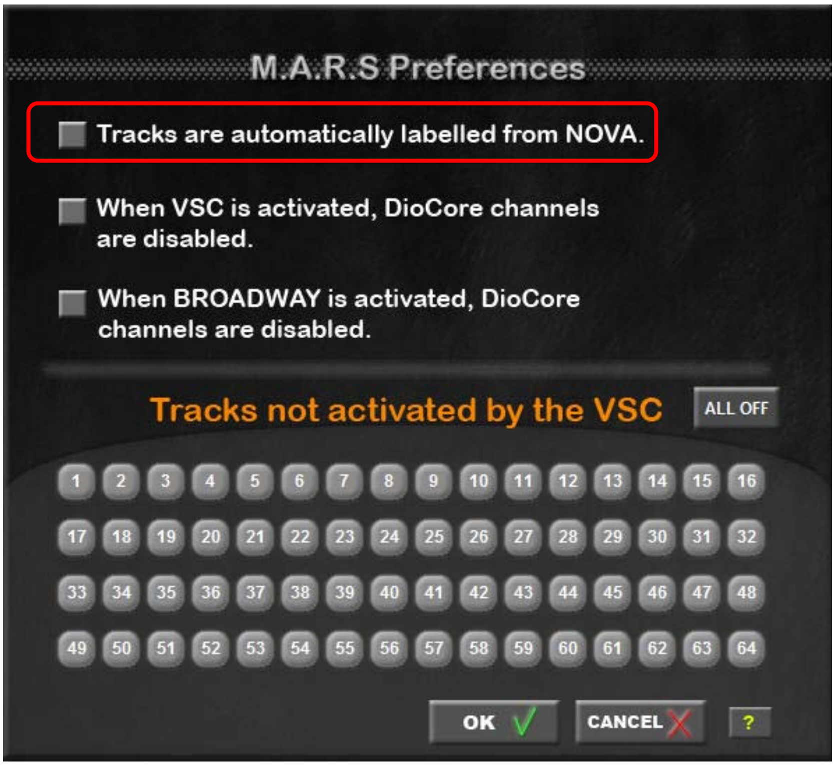
Note that this operation performs a one-time transfer. However, M.A.R.S. can continue to pickup changes to Eclipse channel Labels, by enabling the following option:

1. Return to the Nova displays and select **M.A.R.S.** -> **preferences** from the main menus:

	"MARS -> preferences"
	"MARS -> preferences"



The M.A.R.S. Preference window appears:



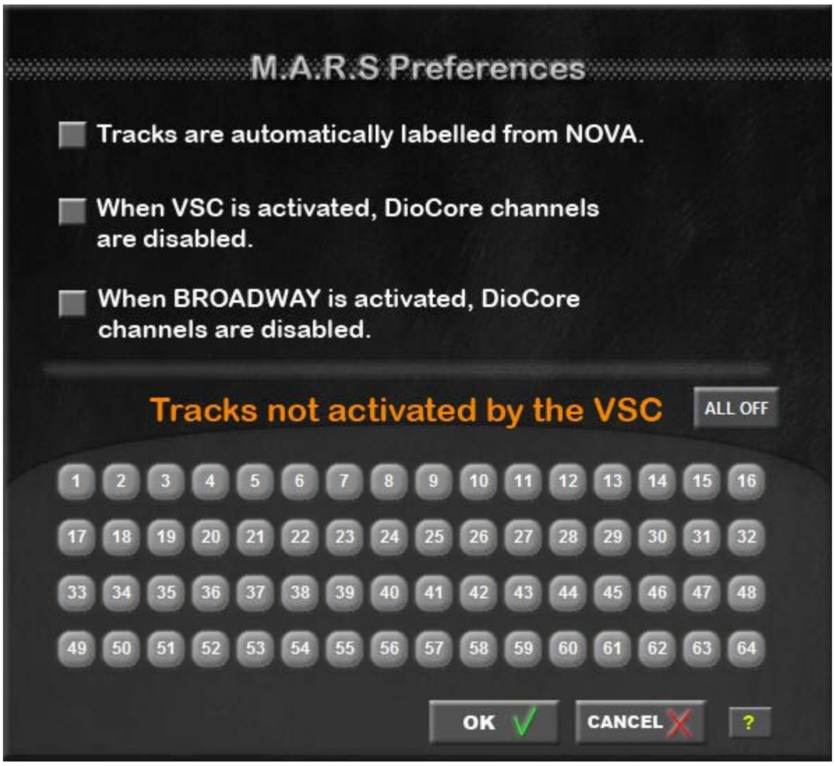
1. Tick the top option - **Tracks are automatically labelled from NOVA**.

When ticked, any Label changes from Nova are transmitted to M.A.R.S.

Other M.A.R.S. Preferences

“MARS -> preferences”

The preferences within the **M.A.R.S. ->** **preferences** window perform the following functions:



M.A.R.S Preferences

☐ Tracks are automatically labelled from NOVA.

☐ When VSC is activated, DioCore channels are disabled.

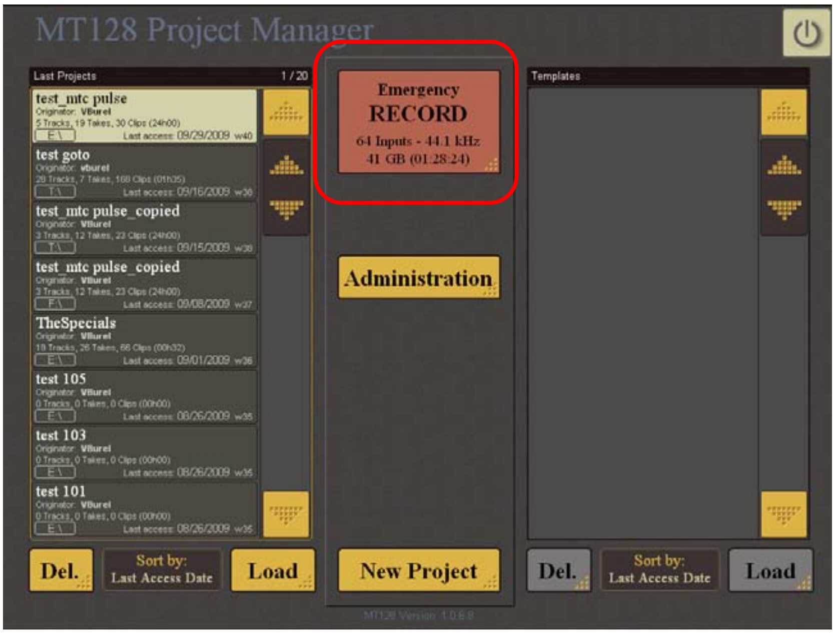
☐ When BROADWAY is activated, DioCore channels are disabled.

Tracks not activated by the VSC

- **Tracks are automatically labelled from NOVA** – see the previous page.
- **When VSC is activated, DioCore channels are disabled** – If this option is ticked, then the DioCore does NOT write data onto the Ethersound channels. For example, depending on the network configuration, you may not want the DioCore to replace signals on the Ethersound network.
- **When BROADWAY is activated, DioCore channels are disabled** – as above, but this option relates only to Broadway mode.
- **Tracks not activated by the VSC** – in this area you can select any Ethersound channels (DioCore mics) which you do not want to be patched by M.A.R.S. when **VSC mode** is active. For example, you can use this option to protect live mics so that they cannot be switched to replay.

Emergency RECORD

This function is ideal if you do not have time to create and name a project, and need to start recording immediately. You can access the function from the **MT128 Project Manager** window within M.A.R.S.:



test_mtc pulse
Originator: VBurel
5 Tracks, 19 Takes, 30 Clips (24h00)
E:\ Last access: 09/29/2009 w40

test goto
Originator: vburel
29 Tracks, 7 Takes, 168 Clips (01h35)
T:\ Last access: 09/16/2009 w38

test_mtc pulse_copied
Originator: VBurel
3 Tracks, 12 Takes, 23 Clips (24h00)
T:\ Last access: 09/15/2009 w38

test_mtc pulse_copied
Originator: VBurel
3 Tracks, 12 Takes, 23 Clips (24h00)
F:\ Last access: 09/08/2009 w37

TheSpecials
Originator: VBurel
19 Tracks, 26 Takes, 66 Clips (00h32)
E:\ Last access: 09/01/2009 w36

test 105
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 103
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 101
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

1. Press the **Emergency RECORD** touch-screen button.

- M.A.R.S. automatically creates a new Project with all 64 tracks record armed, and BWF selected as the audio file type.
- M.A.R.S. starts recording, referenced to internal timecode, from a start time of 00:00:00:00.

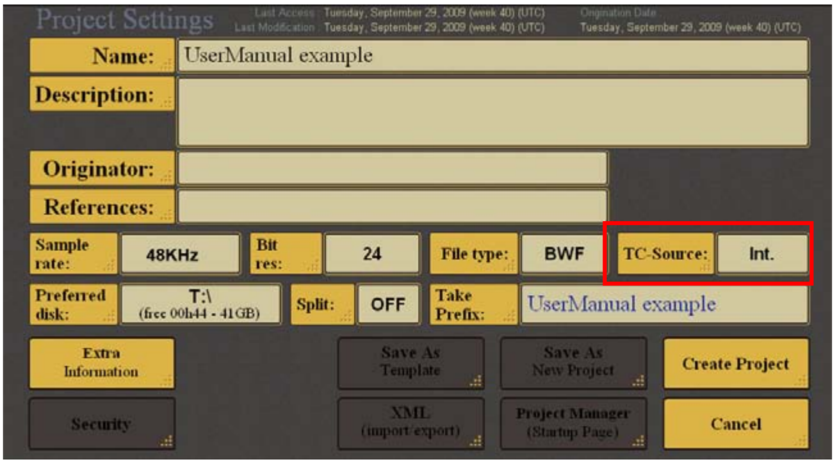
2. When you are ready, press **Stop** to finish the recording.
3. If you now return to the Project Manager window, you will see a new Project called **Emergency Rec n**.
4. Open the project to play back the recorded audio.

Timecode Options

Referencing to LTC or MTC

From the **Project Settings** window within M.A.R.S., you can select whether recordings are referenced to:

- **Int.** – internal timecode (default)
- **LTCi** – Linear timecode from an Ethersound channel.
- **MTC1** – MIDI timecode from the MIDI input on the rear of the console.



Project Settings
Last Access: Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification: Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date: Tuesday, September 29, 2009 (week 40) (UTC)

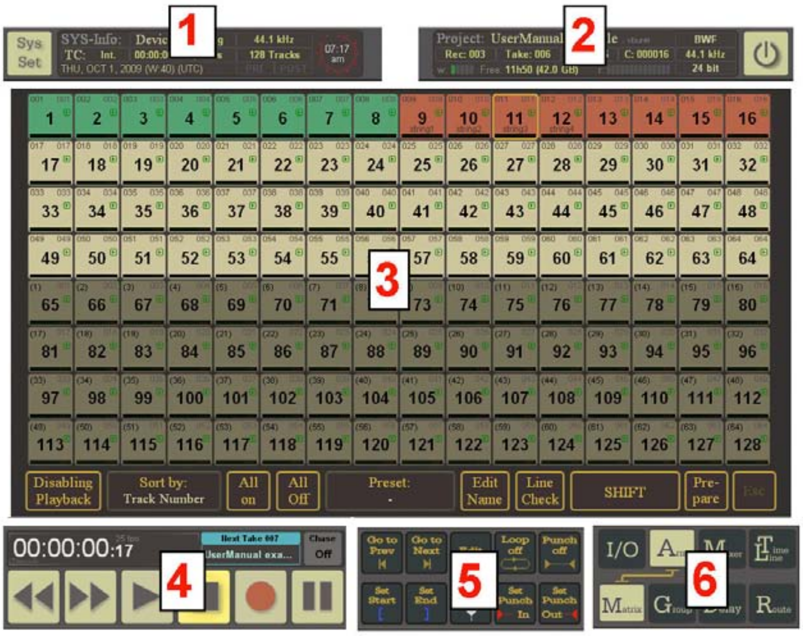
Name: UserManual example
Description:
Originator:
References:
Sample rate: 48KHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix: UserManual example

To reference to LTC, you must choose the LTC input channel.

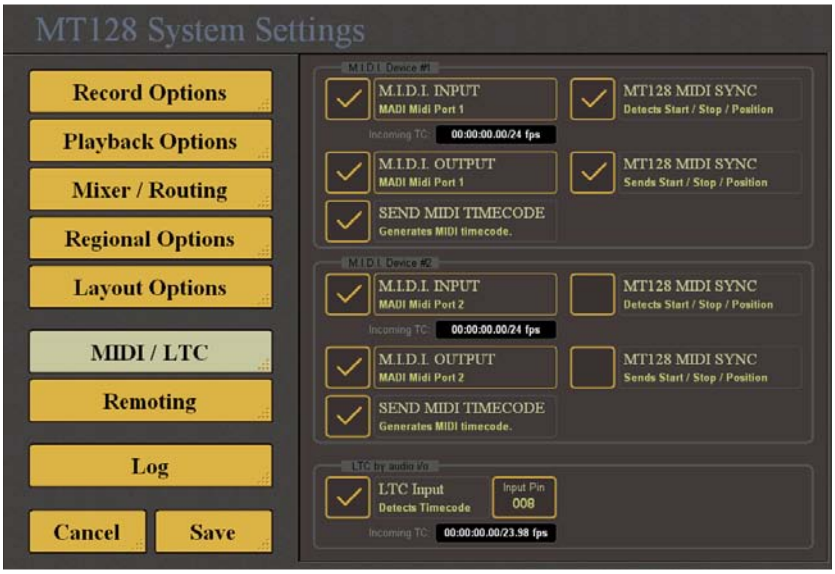
To use MIDI timecode, the MIDI interface card must be enabled.

Both options are set from the **System Settings** on M.A.R.S.:

1. Select **Sys Set** from the top of the M.A.R.S. display (1):



2. Then select the **MIDI/LTC** menu:



M.I.D.I. Device #1
☑ M.I.D.I. INPUT – MADI Midi Port 1
☑ MT128 MIDI SYNC – Detects Start / Stop / Position
Incoming TC: 00:00:00.00/24 fps
☑ M.I.D.I. OUTPUT – MADI Midi Port 1
☑ MT128 MIDI SYNC – Sends Start / Stop / Position
☑ SEND MIDI TIMECODE – Generates MIDI timecode.

M.I.D.I. Device #2
☑ M.I.D.I. INPUT – MADI Midi Port 2
☐ MT128 MIDI SYNC – Detects Start / Stop / Position
Incoming TC: 00:00:00.00/24 fps
☑ M.I.D.I. OUTPUT – MADI Midi Port 2
☐ MT128 MIDI SYNC – Sends Start / Stop / Position
☑ SEND MIDI TIMECODE – Generates MIDI timecode.

LTC by audio i/o
☑ LTC Input – Detects Timecode
Input Pin: 008
Incoming TC: 00:00:00.00/23.98 fps

⏩ Choosing the LTC Input

1. Make sure that the **LTC Input** option at the bottom of the page is ticked.
2. Touch the **Input Ch** box and enter a number from the numeric keyboard.
3. Select **Save** to save any changes and close the **System Settings** window.

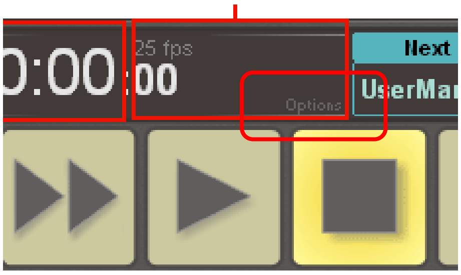
⏩ Enabling the MTC Port

1. Make sure that the **MIDI Input** option at the top of the page is ticked and that the name of the MIDI interface is displayed.
2. If not, touch the **MIDI Input** area to select the MIDI interface from the drop-down list.
3. Repeat to enable the **MIDI Output** port.
4. Remember to select **Save** to save any changes.

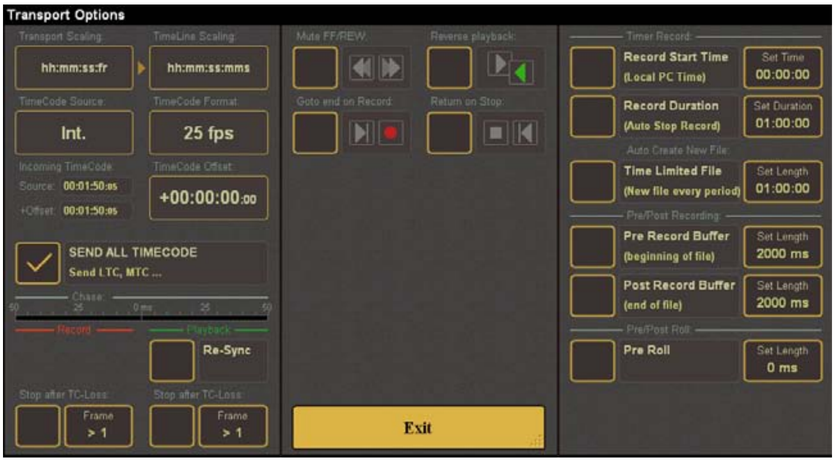
Changing the Timecode Format

This option can be set from the **Transport Options** page.

1. Touch the M.A.R.S. on-screen timecode display (within the milliseconds zone named **options**):



*The **Transport Options** page opens:*



2. Touch the **TimeCode Format** box to select a different timecode format from the drop-down menu.

You can select from 23.98fps, 24fps, 25fps, 29.97fps, 29.97 dfps (drop frame), 30 fps or 30 dfps (drop frame).

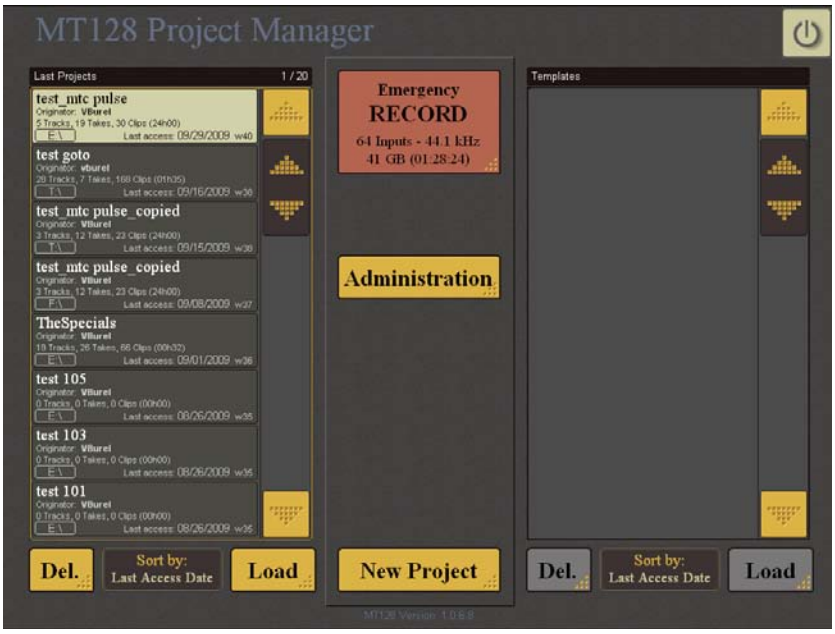
3. Touch **EXIT** to return to the main M.A.R.S. pages.

Project Management in M.A.R.S.

This section describes how to manage Projects within M.A.R.S. Note that only the most common functions are described. For more details on the **MT128** recording system, please refer to the documentation at http://www.vb-audio.com

The MT128 Project Manager Window

This window is the starting point for all projects within M.A.R.S.:



test_mtc pulse
Originator: VBurel
5 Tracks, 19 Takes, 30 Clips (24h00)
E:\ Last access: 09/29/2009 w40

test goto
Originator: vburel
28 Tracks, 7 Takes, 168 Clips (01h35)
T:\ Last access: 09/16/2009 w38

test_mtc pulse_copied
Originator: VBurel
3 Tracks, 12 Takes, 23 Clips (24h00)
T:\ Last access: 09/15/2009 w38

test_mtc pulse_copied
Originator: VBurel
3 Tracks, 12 Takes, 23 Clips (24h00)
F:\ Last access: 09/08/2009 w37

TheSpecials
Originator: VBurel
19 Tracks, 26 Takes, 66 Clips (00h32)
E:\ Last access: 09/01/2009 w36

test 105
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 103
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 101
Originator: VBurel
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

The window is divided into two:

- **Last Projects** - shows the name of every project stored on the M.A.R.S. hard disk.
- **Templates** - shows the name of any template projects which have been created.

You can use the touch-screen buttons to scroll up and down the list, choose different sort options for the list (**Sort by**), delete (**DEL.**) or **Load** any Project or Template.

In the centre are three large touch-screen buttons:

- **Emergeny RECORD** – use this button if you do not have time to create and name a project, and need to start recording immediately. See Page 478.
- **Administration** – this button can be used to access administration functions which are password protected. These functions are not required for normal operation.
- **New Project** – use this button to create a new Project for your recording.

From the **Project Manager** window, you can perform the following operations:

Load a Project

Use the steps described on Page 448 to load back any project stored on the M.A.R.S. hard disk.

Delete a Project

1. Select the Project name from the **Last Projects** list.
2. Then select the **DEL.** button at the bottom left of the display.

*The **Delete Project** pop-up window appears.*

3. Tick the **DELETE MEDIA FILE** option and then select **Delete**.

The Project and any recorded audio files are deleted from the M.A.R.S. hard disk.

Note that you can delete a Project without deleting any media files (leave **DELETE MEDIA FILE** unticked). However, this will only delete the M.A.R.S. Project and not any recorded audio. Therefore, if you wish to free up disk space on M.A.R.S., always tick the **DELETE MEDIA FILE** option.

Note

Create a New Project

Use the steps described on Page 466 to create a new Project on the M.A.R.S. hard disk.

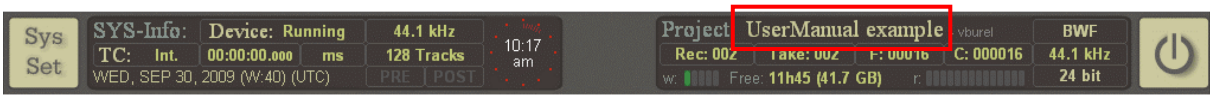
Load or Delete a Template

Having created a template (see Page 485), it can be loaded or deleted from the **Templates** list.

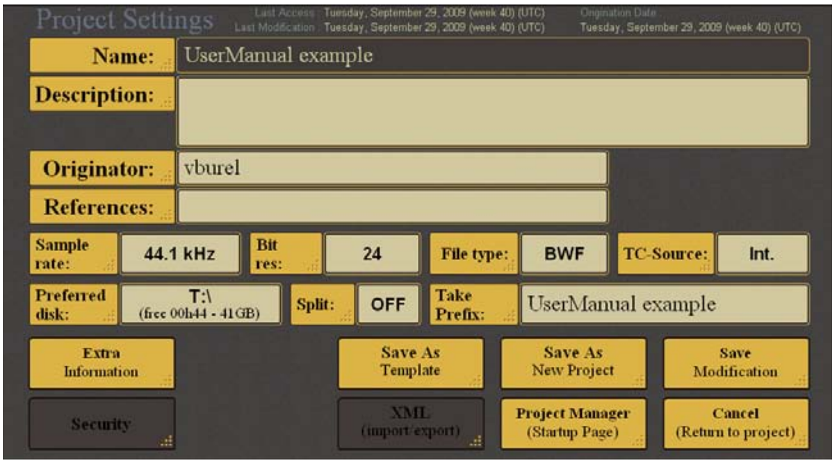
The Project Settings Window

This window contains the settings for a Project – it opens when you select:

- **NEW PROJECT** from the Project Manager, see Page 466.
- **Load** Project from the Project Manager, see Page 448.
- Or if you select the name of the current Project at the top right of the M.A.R.S. display:



When you open the **Project Settings** window for the current Project (as shown above), you can perform the following functions:


Project Settings
Last Access : Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification : Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date : Tuesday, September 29, 2009 (week 40) (UTC)
Name: UserManual example
Description:
Originator: vburel
References:
Sample rate: 44.1 kHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix: UserManual example

Edit the Current Project

Having created a Project on M.A.R.S., it cannot be renamed. However, you can change its settings in order to modify the timecode source, file format, etc. for the next recording.

1. With the **Project Settings** window open, edit the options – for example, touch **TC-Source:** to change the reference timecode.

*Whenever you change a setting, the **Save Modification** button flashes.*

2. Select **Save Modification** to save the changes.

The settings are saved and the window closes.

Create a New Project using Save As

This allows you to create a new Project from an existing one.

Note

Note that this operation creates a new Project folder for new recordings, but does not copy existing audio into the new folder. If you wish to copy audio already recorded into a new folder, then you should create a new Project and use the Import function as described on Page 491.

To use Save As:

1. Open the **Project Settings** window for the Project you wish to copy.
2. Select Save As (New Project).

*The **Save As** (new project) pop-up opens.*

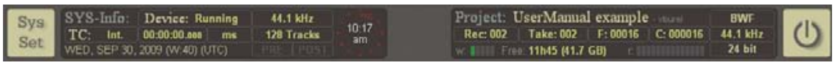
3. Select **disk E** and the current Project name.
4. Enter a new name from the on-screen QWERTY keyboard.

Note

Note that you must change the name. If not, a new Project cannot be created.

5. Then select **Save**.

The system saves a new Project which automatically becomes the current Project – shown in the **Project:** area at the top right of the display:

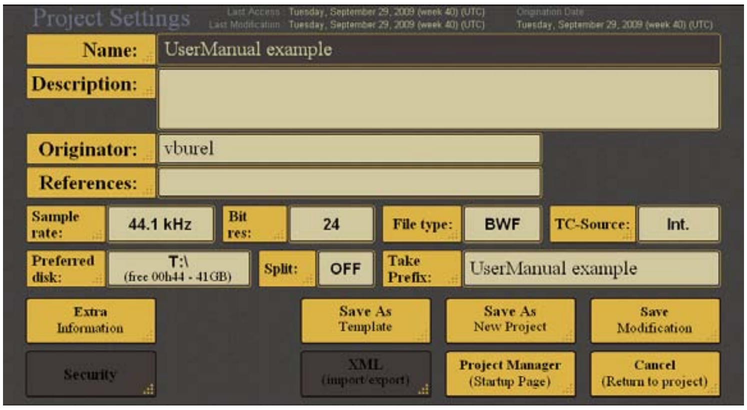


SYS-Info: Device: Running | 44.1 kHz
TC: Int. 00:00:00.000 ms | 128 Tracks
WED, SEP 30, 2009 (W:40) (UTC)
10:17 am
Project: UserManual example
Rec: 002 | Take: 002 | F: 00016 | C: 000016
Free: 11h45 (41.7 GB)
BWF | 44.1 kHz | 24 bit

Create a Template

Templates can be used as the starting point for new Projects on M.A.R.S. For example, you might create a template which has 32 tracks armed.

1. First create a new Project and configure its settings, such as the track arming.
2. Then open the **Project Settings** window:



Project Settings
Last Access: Tuesday, September 29, 2009 (week 40) (UTC)
Last Modification: Tuesday, September 29, 2009 (week 40) (UTC)
Origination Date: Tuesday, September 29, 2009 (week 40) (UTC)
Name: UserManual example
Description:
Originator: vburel
References:
Sample rate: 44.1 kHz
Bit res: 24
File type: BWF
TC-Source: Int.
Preferred disk: T:\ (free 00h44 - 41GB)
Split: OFF
Take Prefix: UserManual example

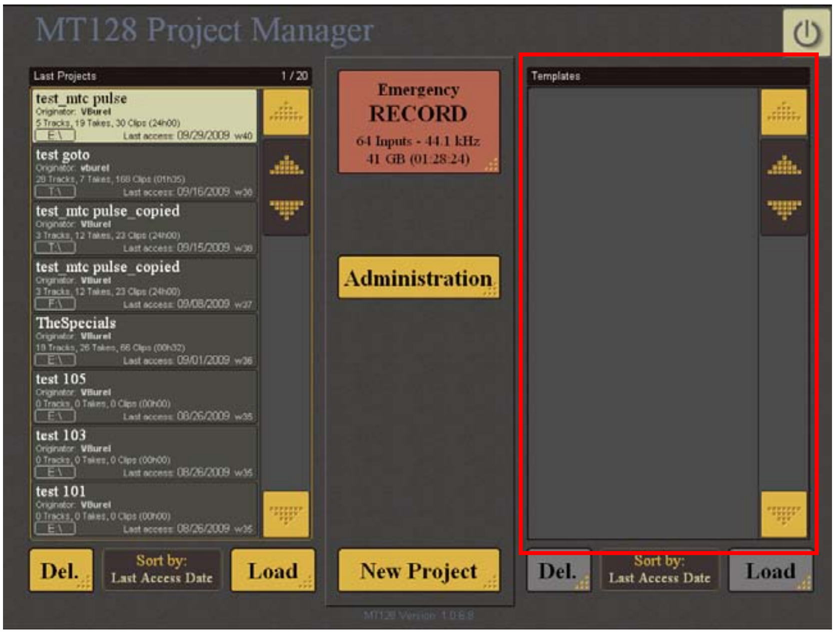
3. Select **Save As Template**.

The ***Save project as Template*** *pop-up appears.*

4. Select **Save**.
5. Then select **OK** to confirm.

The template is created.

You can check it by returning to the **Project Manager** window; the template appears in the list on the right:



test_mtc pulse
Originator: **VBurel**
5 Tracks, 19 Takes, 30 Clips (24h00)
E:\ Last access: 09/29/2009 w40

test goto
Originator: **vburel**
20 Tracks, 7 Takes, 168 Clips (01h35)
T:\ Last access: 09/16/2009 w38

test_mtc pulse_copied
Originator: **VBurel**
3 Tracks, 12 Takes, 23 Clips (24h00)
T:\ Last access: 09/15/2009 w38

test_mtc pulse_copied
Originator: **VBurel**
3 Tracks, 12 Takes, 23 Clips (24h00)
F:\ Last access: 09/08/2009 w37

TheSpecials
Originator: **VBurel**
19 Tracks, 26 Takes, 66 Clips (00h32)
E:\ Last access: 09/01/2009 w36

test 105
Originator: **VBurel**
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 103
Originator: **VBurel**
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

test 101
Originator: **VBurel**
0 Tracks, 0 Takes, 0 Clips (00h00)
E:\ Last access: 08/26/2009 w35

To create a new project from a template:

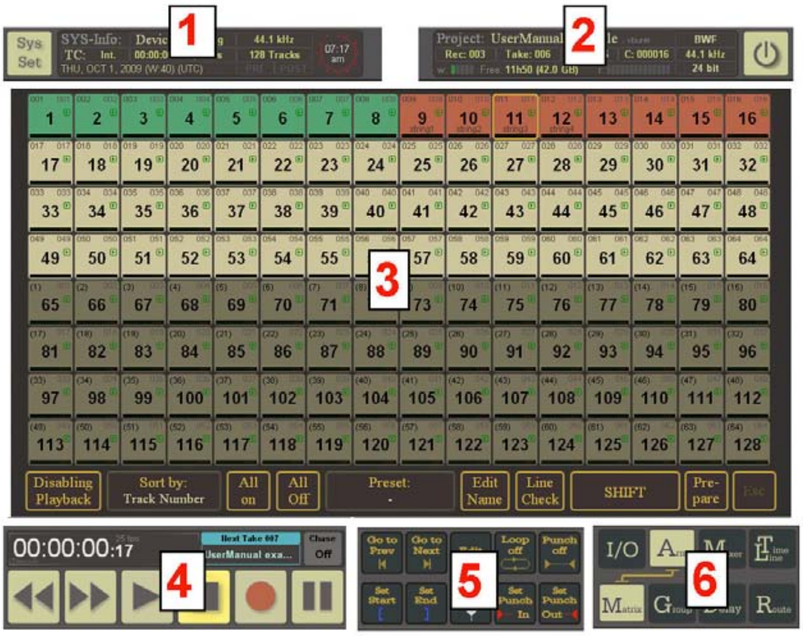
1. Select a file from the **Templates** list.
2. Select **Load**.

The ***Project Settings*** *window opens.*

3. Name the Project in the usual manner.
4. Then select **Create Project** to create the project.

The Current Project Window

Once you have created or opened a Project on M.A.R.S., the main operating window appears:

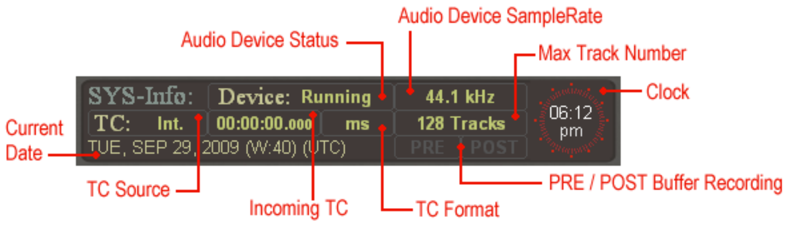


This window is divided into 6 areas. Different pages can be opened within the main area (3) using the Page selection buttons (6). All other areas remain in constant view.

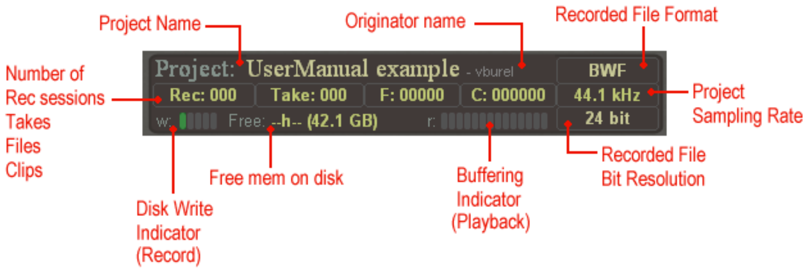
Note that the M.A.R.S. application can be shut down by touching or selecting the Quit icon at the top right of the display. If you do touch this icon, then you will need to restart M.A.R.S. either by powering off and on, or using the restart procedure described on Page 500.

Here is an overview of each display area:

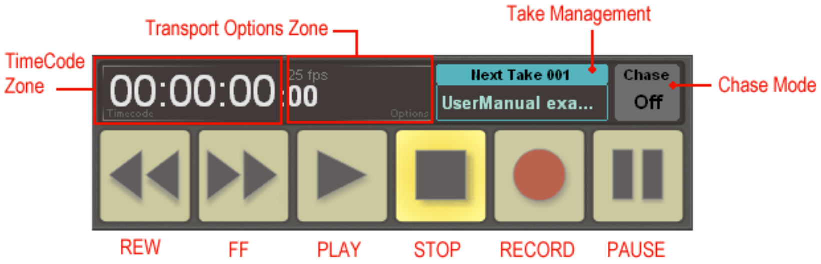
⏩ Sys Info (1)



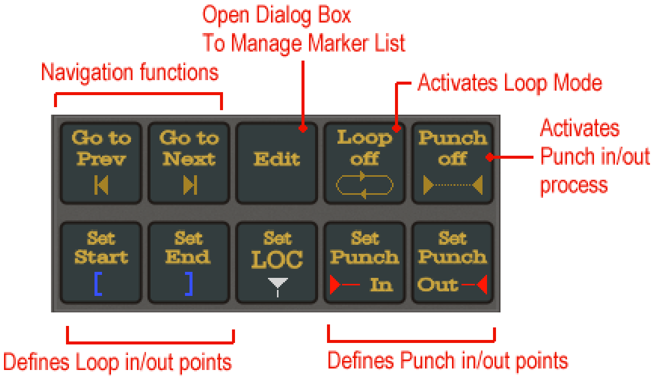
Project Info (2)



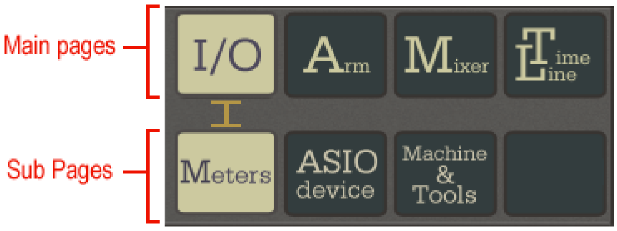
Transport Control (4)



Marker Control (5)



Page Selector (6)



1. Use the Page selector buttons to select different sub pages – for example, **Arm** + **Matrix** opens the **Arm** -> **Matrix** page.

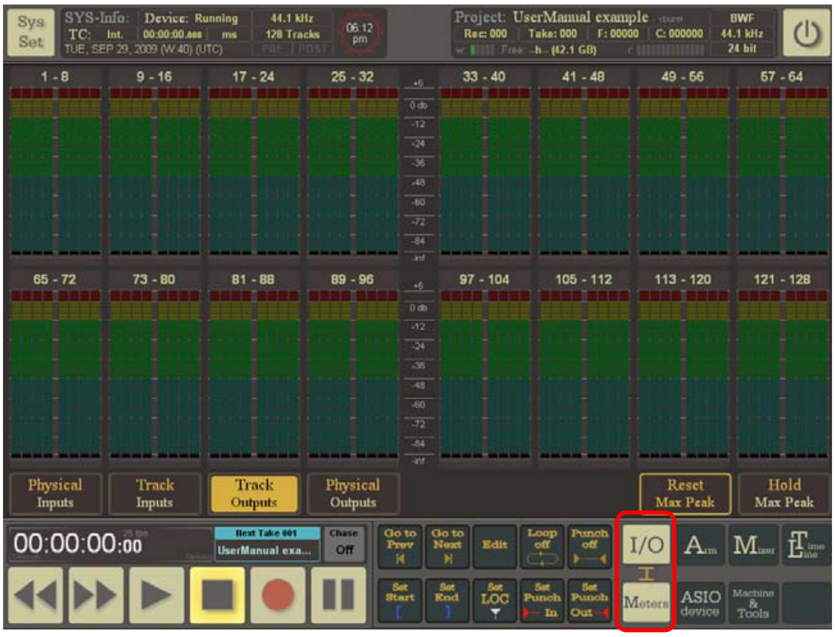
M.A.R.S. Sub Pages

You can find full details on M.A.R.S. sub pages from the **MT128** documentation at http://www.vb-audio.com

The most useful pages for M.A.R.S. applications are:

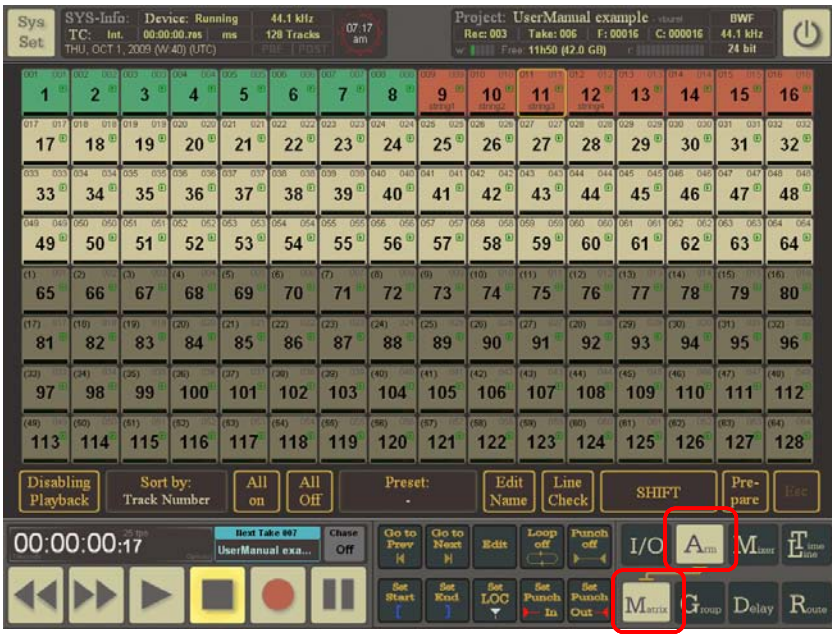
⏩ I/O -> Meters

This page provides metering for all tracks on M.A.R.S.:



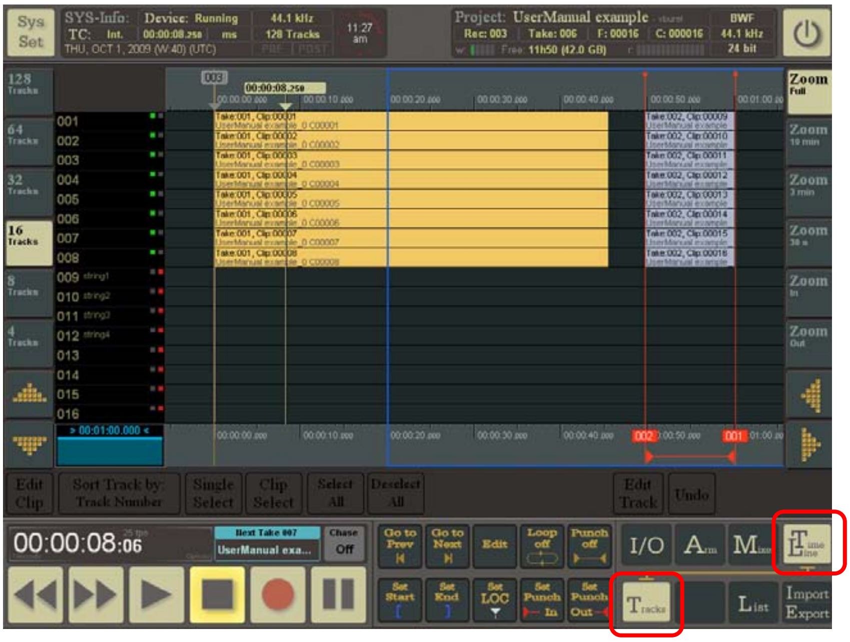
⏩ Arm -> Matrix

This page is used for track arming and naming tracks. See Page 470 for details:



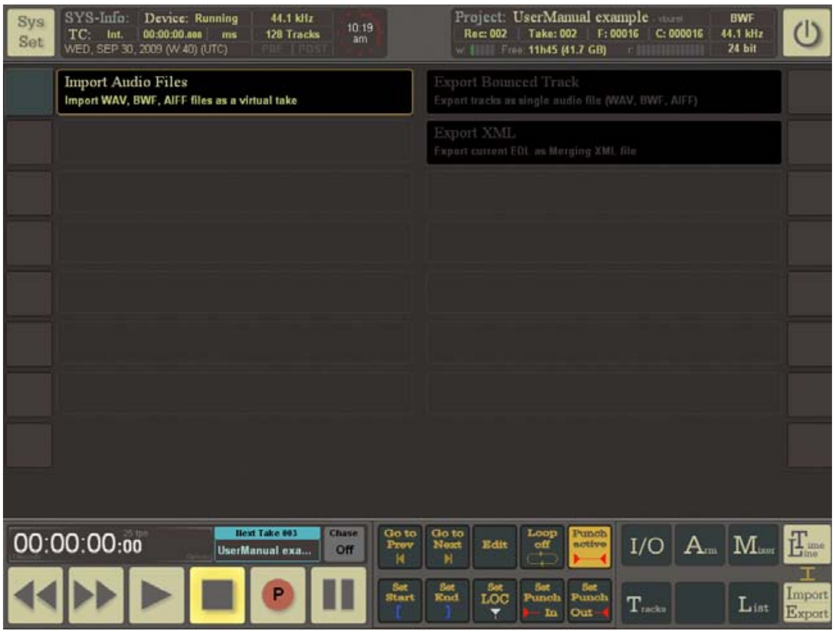
⏩ Timeline -> Tracks

This page provides a horizontal view of audio clips recorded on M.A.R.S.:



⏩ Timeline -> Import/Export

This page provides access to import and export options. See Page 491 for details.


Sys Set
SYS-Info: Device: Running 44.1 kHz
TC: Int. 00:00:00.000 ms 128 Tracks
WED, SEP 30, 2009 (W 40) (UTC)
10:19 am
Project: UserManual example
Rec: 002 Take: 002 F: 00016 C: 000016
BWF 44.1 kHz 24 bit
Free: 11h45 (41.7 GB)
Import Audio Files
Import WAV, BWF, AIFF files as a virtual take
Export Bounced Track
Export tracks as single audio file (WAV, BWF, AIFF)
Export XML
Export current EDL as Merging XML file
00:00:00:00
Next Take 003
UserManual exa...
Chase Off
Go to Prev
Go to Next
Edit
Loop off
Punch active
Set Start
Set End
Set LOC
Set Punch In
Set Punch Out
I/O
Am
Mixer
Timeline
Tracks
List
Import Export

Importing Audio

This function imports audio files into an existing Project. For example, to make a copy of audio files on the M.A.R.S. hard disk, or to import audio from an external drive.

Use this function to make a copy of an existing Project, by first creating a new Project and then importing the audio.

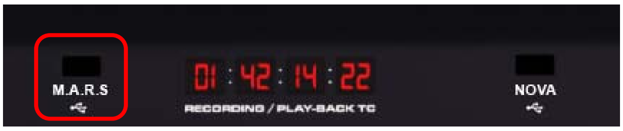
Tip

We are going to import audio from an existing Project into a new one:

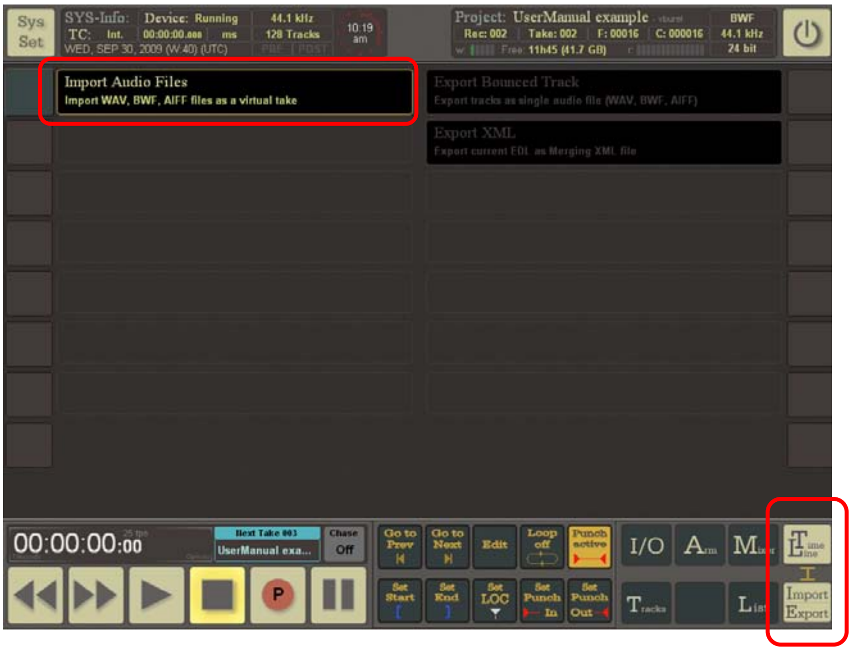
1. First follow the steps on Page 466 to create a new Project.

This creates a new Project folder into which you can import your audio.

2. If importing from an external drive, connect the drive to the M.A.R.S. USB port on the Eclipse front panel:

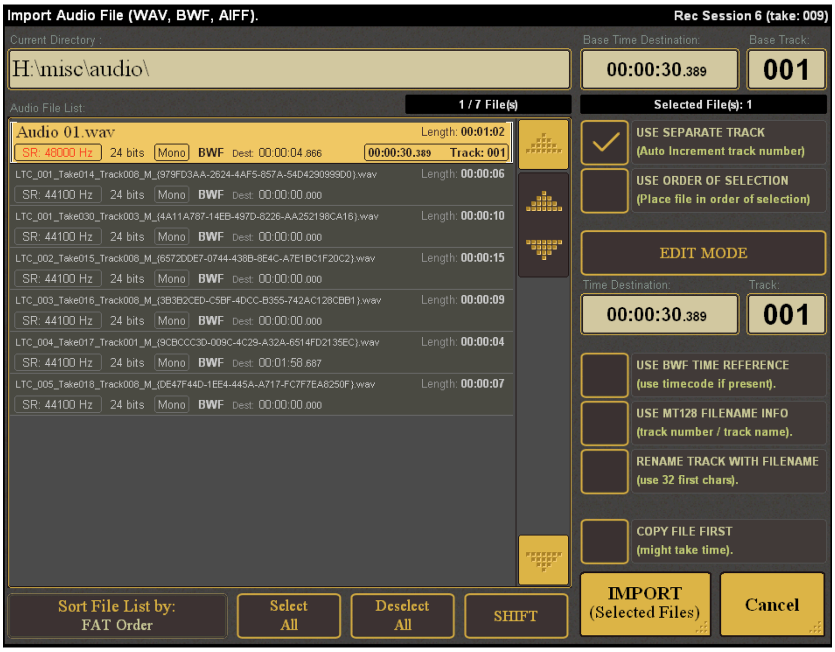


3. Then select **TimeLine -> Import/Export**:



4. Select the **Import Audio Files** button.

*The **Import Audio File** window opens:*



Import Audio File (WAV, BWF, AIFF). Rec Session 6 (take: 009)

Current Directory : H:\misc\audio\

Base Time Destination: 00:00:30.389 Base Track: 001

Audio File List: 1 / 7 File(s)

Selected File(s): 1

Audio 01.wav Length: 00:01:02
SR: 48000 Hz 24 bits Mono BWF Dest: 00:00:04.866 00:00:30.389 Track: 001

LTC_001_Take014_Track008_M_{979FD3AA-2624-4AF5-857A-54D4290999D0}.wav Length: 00:00:06
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_001_Take030_Track003_M_{4A11A787-14EB-497D-8226-AA252198CA16}.wav Length: 00:00:10
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_002_Take015_Track008_M_{6572DDE7-0744-438B-8E4C-A7E1BC1F20C2}.wav Length: 00:00:15
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_003_Take016_Track008_M_{3B3B2CED-C5BF-4DCC-B355-742AC128CBB1}.wav Length: 00:00:09
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_004_Take017_Track001_M_{9CBCCC3D-009C-4C29-A32A-6514FD2135EC}.wav Length: 00:00:04
SR: 44100 Hz 24 bits Mono BWF Dest: 00:01:58.687

LTC_005_Take018_Track008_M_{DE47F44D-1EE4-445A-A717-FC7F7EA8250F}.wav Length: 00:00:07
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

☑ USE SEPARATE TRACK (Auto Increment track number)

☐ USE ORDER OF SELECTION (Place file in order of selection)

Time Destination: 00:00:30.389 Track: 001

☐ USE BWF TIME REFERENCE (use timecode if present).

☐ USE MT128 FILENAME INFO (track number / track name).

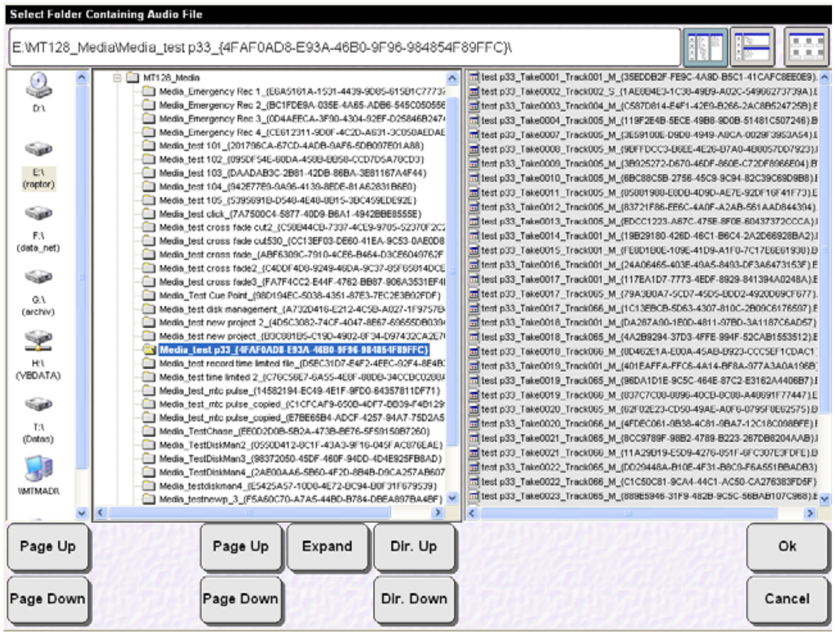
☐ RENAME TRACK WITH FILENAME (use 32 first chars).

☐ COPY FILE FIRST (might take time).

On your system, you should see the contents of drive **E**.

5. Touch the top bar (**E:\**) to open the File selector.

*The **File Selector** window opens:*



Select Folder Containing Audio File

E:\MT128_Media\Media_test p33_{4FAF0AD8-E93A-46B0-9F96-984854F89FFC}\

On the left of the display, you will see the drives connected to the M.A.R.S. computer – drive **E** plus any external USB drives.

6. Select **E:\** to open the M.A.R.S. hard drive.

Or, select the corresponding file path for your USB drive.

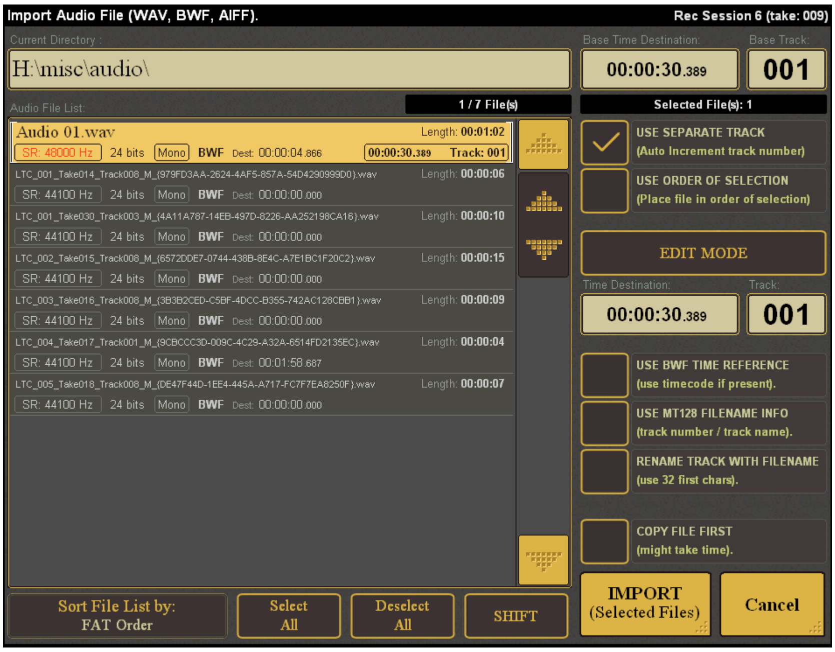
On the **E:\** drive, files are organised into two main directories:

- **MT128_Media** – inside this folder are the individual media folders for every Project on M.A.R.S.; these folders contain your audio files.
- **MT128_Projects** – inside this folder are the individual project folders for every Project on M.A.R.S.; these folders contain all the project information.

It is the audio files we are interested in so:

7. Select **MT128_Media** to open the folder.
8. Then select the sub folder which contains the audio you wish to import – e.g. **Media_Walking**.
9. Then select **OK**.

*The **File Selector** closes, and the media files from your folder appear in the **Import Audio File** window:*



Import Audio File (WAV, BWF, AIFF).
Rec Session 6 (take: 009)

Current Directory : H:\misc\audio\

Base Time Destination: 00:00:30.389
Base Track: 001

Audio File List: 1 / 7 File(s)

Audio 01.wav Length: 00:01:02
SR: 48000 Hz 24 bits Mono BWF Dest: 00:00:04.866 00:00:30.389 Track: 001

LTC_001_Take014_Track008_M_{979FD3AA-2624-4AF5-857A-54D4290999D0}.wav Length: 00:00:06
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_001_Take030_Track003_M_{4A11A787-14EB-497D-8226-AA252198CA16}.wav Length: 00:00:10
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_002_Take015_Track008_M_{6572DDE7-0744-438B-8E4C-A7E1BC1F20C2}.wav Length: 00:00:15
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_003_Take016_Track008_M_{3B3B2CED-C5BF-4DCC-B355-742AC128CBB1}.wav Length: 00:00:09
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

LTC_004_Take017_Track001_M_{9CBCCC3D-009C-4C29-A32A-6514FD2135EC}.wav Length: 00:00:04
SR: 44100 Hz 24 bits Mono BWF Dest: 00:01:58.687

LTC_005_Take018_Track008_M_{DE47F44D-1EE4-445A-A717-FC7F7EA8250F}.wav Length: 00:00:07
SR: 44100 Hz 24 bits Mono BWF Dest: 00:00:00.000

Selected File(s): 1

☑ USE SEPARATE TRACK (Auto Increment track number)
☐ USE ORDER OF SELECTION (Place file in order of selection)

Time Destination: 00:00:30.389
Track: 001

☐ USE BWF TIME REFERENCE (use timecode if present).
☐ USE MT128 FILENAME INFO (track number / track name).
☐ RENAME TRACK WITH FILENAME (use 32 first chars).
☐ COPY FILE FIRST (might take time).

Note that the files appear in this list in alphabetical order. Therefore, the best way to proceed depends on how the files are named.

Note

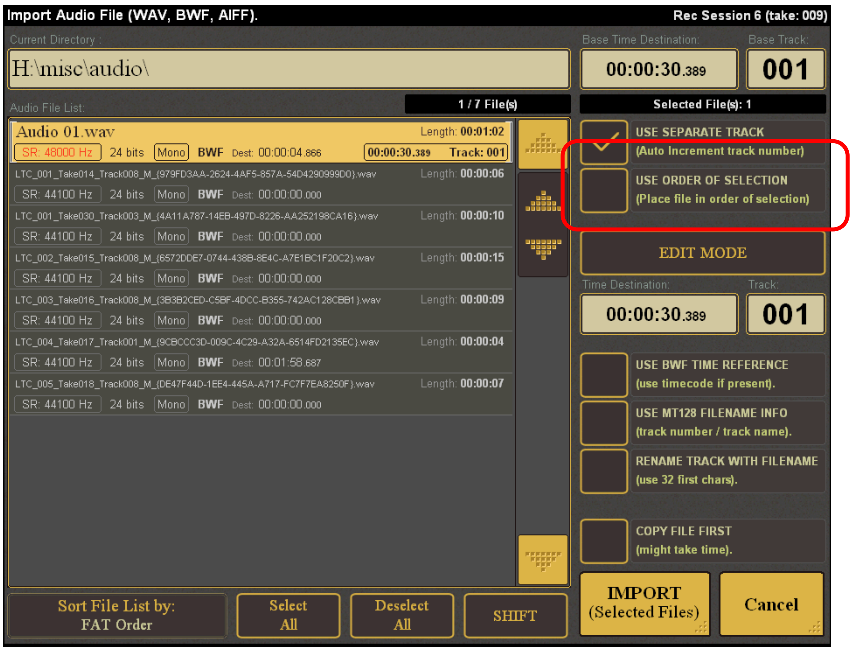
If you files are named as “01-Filename”, “02-Filename”, etc. then proceed as follows:

1. Touch **Select All**.
2. Tick the **COPY FILE FIRST** option.
3. Select **IMPORT (Selected Files)**.

The audio files are imported onto tracks 1 to 64 in their selected order – i.e. “01-Filename” to Track 1, “02-Filename” to Track 2, and so on.

If the files you wish to import are not named alphabetically, then you cannot use this method as the track order will not match the original recording. Instead:

1. Select the **USE ORDER OF SELECTION** option on the right of the window:


Import Audio File (WAV, BWF, AIFF).
Rec Session 6 (take: 009)

Current Directory : H:\misc\audio\
Base Time Destination: 00:00:30.389
Base Track: 001

Audio File List: 1 / 7 File(s)
Selected File(s): 1

```
Audio 01.wav                                                              Length: 00:01:02
SR: 48000 Hz  24 bits  Mono  BWF  Dest: 00:00:04.866          00:00:30.389   Track: 001
LTC_001_Take014_Track008_M_{979FD3AA-2624-4AF5-857A-54D4290999D0}.wav     Length: 00:00:06
SR: 44100 Hz  24 bits  Mono  BWF  Dest: 00:00:00.000
LTC_001_Take030_Track003_M_{4A11A787-14EB-497D-8226-AA252198CA16}.wav     Length: 00:00:10
SR: 44100 Hz  24 bits  Mono  BWF  Dest: 00:00:00.000
LTC_002_Take015_Track008_M_{6572DDE7-0744-438B-8E4C-A7E1BC1F20C2}.wav     Length: 00:00:15
SR: 44100 Hz  24 bits  Mono  BWF  Dest: 00:00:00.000
LTC_003_Take016_Track008_M_{3B3B2CED-C5BF-4DCC-B355-742AC128CBB1}.wav     Length: 00:00:09
SR: 44100 Hz  24 bits  Mono  BWF  Dest: 00:00:00.000
LTC_004_Take017_Track001_M_{9CBCCC3D-009C-4C29-A32A-6514FD2135EC}.wav     Length: 00:00:04
SR: 44100 Hz  24 bits  Mono  BWF  Dest: 00:01:58.687
LTC_005_Take018_Track008_M_{DE47F44D-1EE4-445A-A717-FC7F7EA8250F}.wav     Length: 00:00:07
SR: 44100 Hz  24 bits  Mono  BWF  Dest: 00:00:00.000
```

☑ USE SEPARATE TRACK (Auto Increment track number)
☐ USE ORDER OF SELECTION (Place file in order of selection)

Time Destination: 00:00:30.389
Track: 001

☐ USE BWF TIME REFERENCE (use timecode if present).
☐ USE MT128 FILENAME INFO (track number / track name).
☐ RENAME TRACK WITH FILENAME (use 32 first chars).
☐ COPY FILE FIRST (might take time).

2. Now select each audio file in the order in which you wish to import them – i.e. touch the audio file for track 1, then the file for track 2 and so on.

Notice that each time you make a selection, the ***Track*** *counter updates to keep a running total of your selections.*

Using this method, files can be imported to tracks in any order.

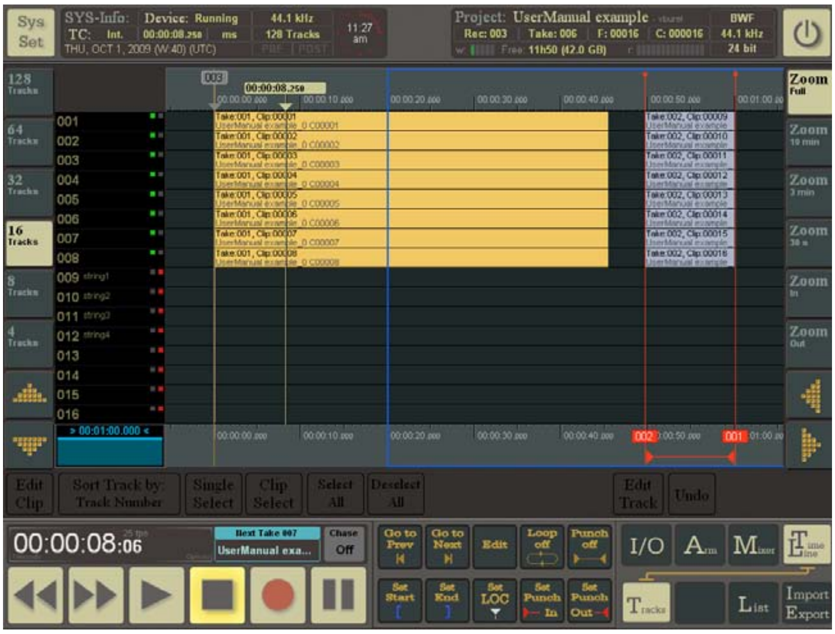
3. When you have selected all the files you wish to import, tick the **COPY FILE FIRST** option.
4. And select IMPORT (Selected Files).

The audio files are imported to M.A.R.S. tracks in the selected order.

Note

Note that if you do not select the **COPY FILE FIRST** option, then the media files are imported to the Project, but are not copied into the current project's media folder. This has the advantage of saving disk space. However, it does mean that only one version of the audio files remains on the M.A.R.S. hard disk; these files are now referenced as virtual files from the current project.

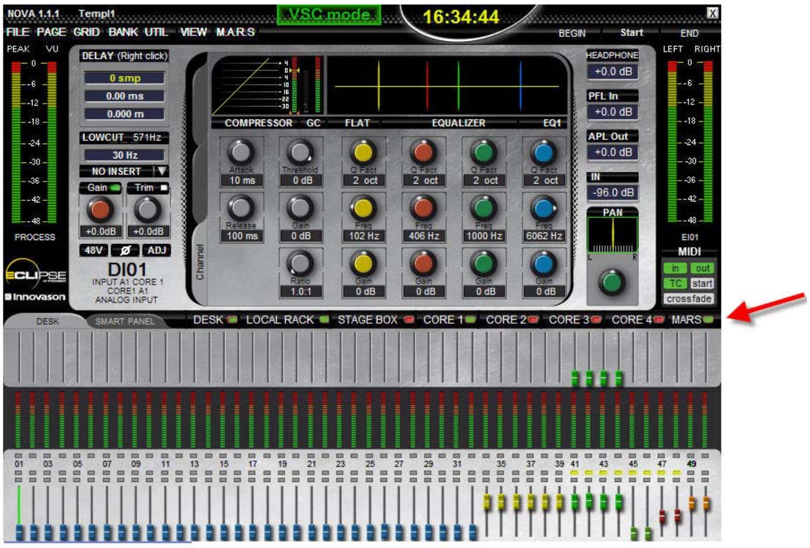
5. Select **TimeLine** -> **Tracks** to view the horizontal timeline of audio clips on M.A.R.S. to confirm the import has been successful:



Troubleshooting

The following section describes some typical problems and how to resolve them:

The MARS LED on the Main Mix display is red


NOVA 1.1.1 Templ1
VSC mode
16:34:44
FILE PAGE GRID BANK UTIL VIEW M.A.R.S
DELAY (Right click)
COMPRESSOR GC FLAT EQUALIZER EQ1
HEADPHONE
PFL In
APL Out
PAN
DI01
MIDI
DESK SMART PANEL
DESK LOCAL RACK STAGE BOX CORE 1 CORE 2 CORE 3 CORE 4 MARS

This indicates a problem with the Ethersound connection.

1. Check the physical Ethersound network connections carefully.

Please see Page 45 for details on connections. Or just connect the Ethersound **OUT** of Eclipse to the Ethersound **IN** of Mars (if no DioCore is used).

2. Switch the touch-screen to **M.A.R.S.** and check that M.A.R.S. is booted.

When M.A.R.S. is booted and ready for operation, you will see one of the following:

- The Project Manager window – see Page 482.
- The Project Settings window – see Page 484.
- The Current Project window – see Page 487.

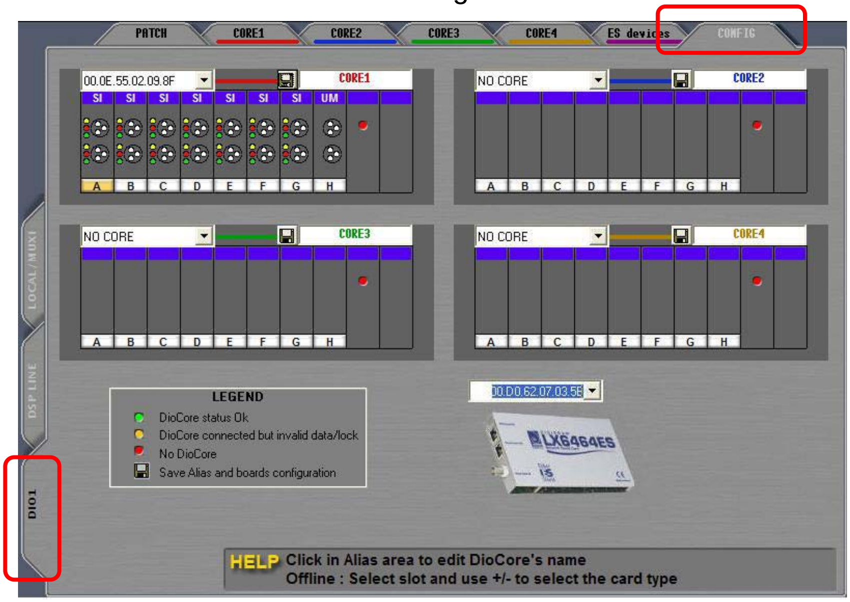
If you cannot switch the touch-screen to M.A.R.S. or you do not see an operational display, then you may need to reboot M.A.R.S. (see Page 500).

If everything looks ok, check the Ethersound address of M.A.R.S. within the Nova software:

3. Switch the touch-screen to **NOVA**:

4. Select the **PATCH INPUT** grid.

	Patch IN (UTILITIES)
	“GRID -> Patch Input”
	[F11]



LEGEND
🟢 DioCore status Ok
🟡 DioCore connected but invalid data/lock
🔴 No DioCore
💾 Save Alias and boards configuration

HELP Click in Alias area to edit DioCore's name
Offline : Select slot and use +/- to select the card type

Above the picture of the M.A.R.S. Ethersound card, you should see its MAC address. If not:

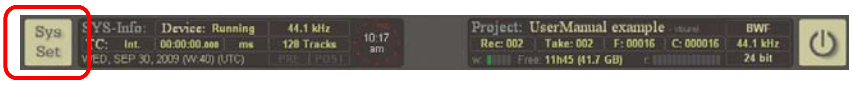
5. Select the M.A.R.S. Ethersound address from the drop-down list.

If there is no Ethersound address available, then there is still a problem with the Ethersound connection. Please contact Innovason service for further assistance.

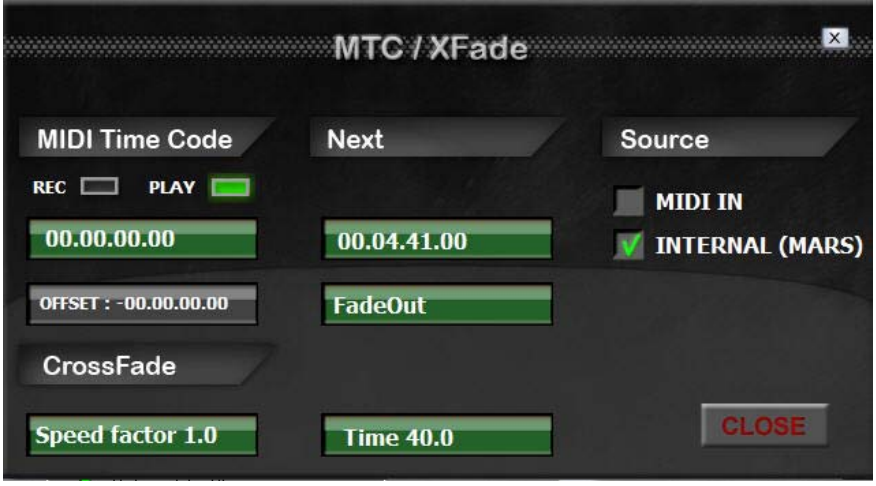
⏩ M.A.R.S. will not go into Play, Stop, etc. when controlled from the TRANSPORT panel

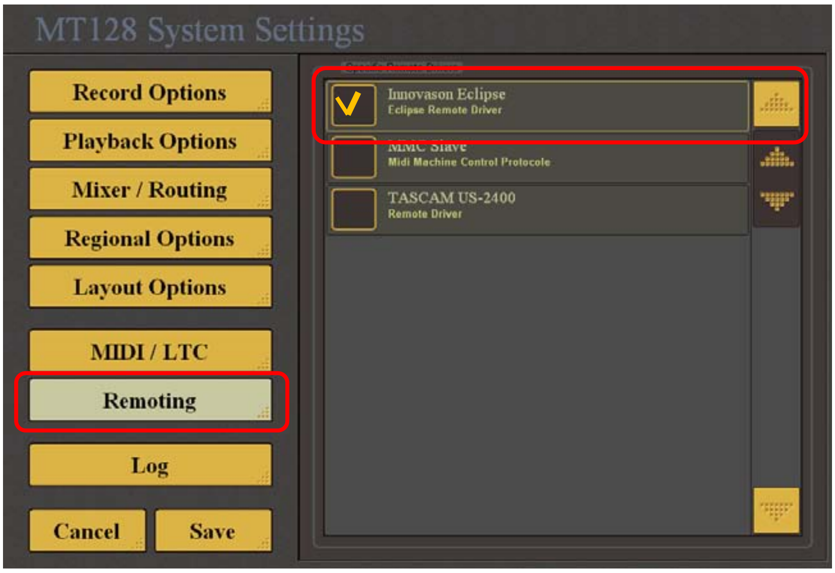
Assuming you have a valid Ethersound connection to M.A.R.S., and M.A.R.S. is booted, this may occur if the remote control option for Eclipse has been turned off within the M.A.R.S. **System Settings** window:

1. Switch the touch-screen to **M.A.R.S.**
2. Select **Sys Set** at the top left of the display to open the **System Settings**.



3. Select the **Remoting** menu:





☑ Innovason Eclipse
Eclipse Remote Driver

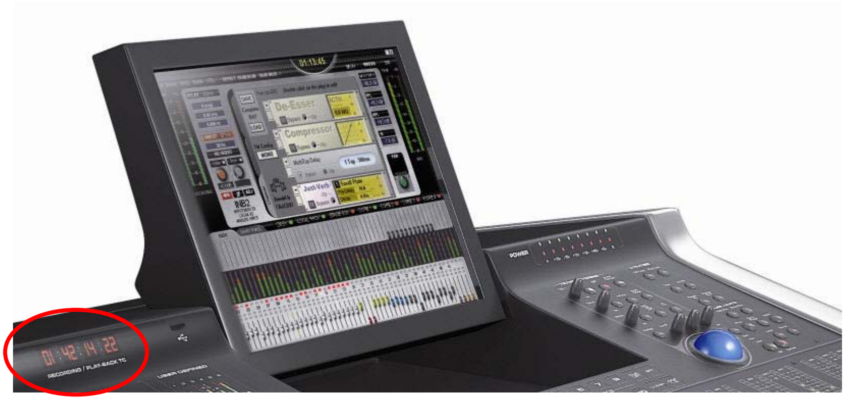
☐ MMC Slave
Midi Machine Control Protocole

☐ TASCAM US-2400
Remote Driver

The **Innovason Eclipse** option must be ticked.

4. Select **Save** to save the change and close the **System Settings** window.

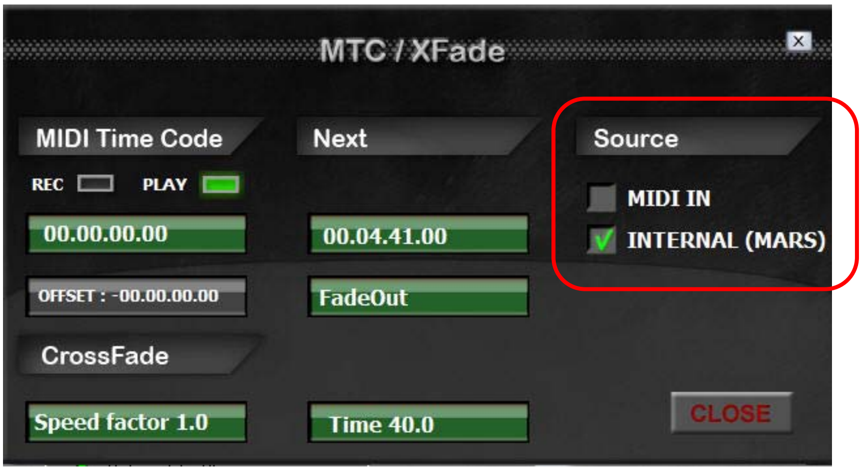
⏩ M.A.R.S. plays back but the correct timecode does not appear in the front panel display:



This timecode display can be switched between Internal (M.A.R.S.) and MIDI timecode within the Nova software.

1. Switch the touch-screen to **NOVA.**
2. Select **VIEW -> MTC/Xfade** from the main menus.

*The **MTC/Xfade** window appears:*


MTC / XFade

MIDI Time Code
REC ☐ PLAY ▩
00.00.00.00
OFFSET : -00.00.00.00

Next
00.04.41.00
FadeOut

Source
☐ MIDI IN
☑ INTERNAL (MARS)

CrossFade
Speed factor 1.0
Time 40.0

CLOSE

3. Under Source, select **INTERNAL (MARS)**.

This will switch the display to show timecode from M.A.R.S.

If **MIDI IN** is selected, the timecode display shows timecode received at the Eclipse (Nova) MIDI Input.

4. Select **CLOSE** to quit the window.

⏩ Restarting M.A.R.S. and/or Nova

You can restart both Nova and M.A.R.S. by powering off and powering on the console frame. However, if you wish to only restart M.A.R.S., without affecting Nova, or vice versa, you can use the console keyboard as follows:

- To restart only the **Nova** control computer:

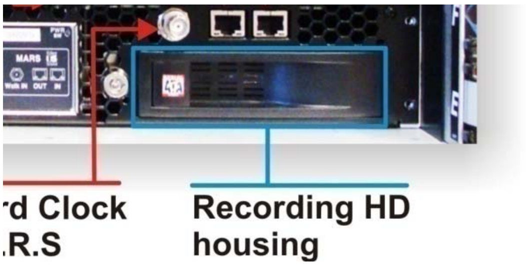
Press [**CTRL**] + [**ALT**] + [**DEL**] when the touch-screen is switched to **NOVA**.

- To restart only the **M.A.R.S.** control computer:

Press [**CTRL**] + [**ALT**] + [**INSERT**] when the touch-screen is switched to **M.A.R.S**.

Replacing the M.A.R.S. Hard Disk

The M.A.R.S. hard disk can be removed from the rear of the console frame:



M.A.R.S. is shipped with a single 500GB disk which can record for approximately 8 hours across all 64 tracks. Should you need to purchase a spare disk for extra recorded material, any SATA hard disk can be used; the disk must be NTFS formatted.

Chapter 11: Technical Procedures

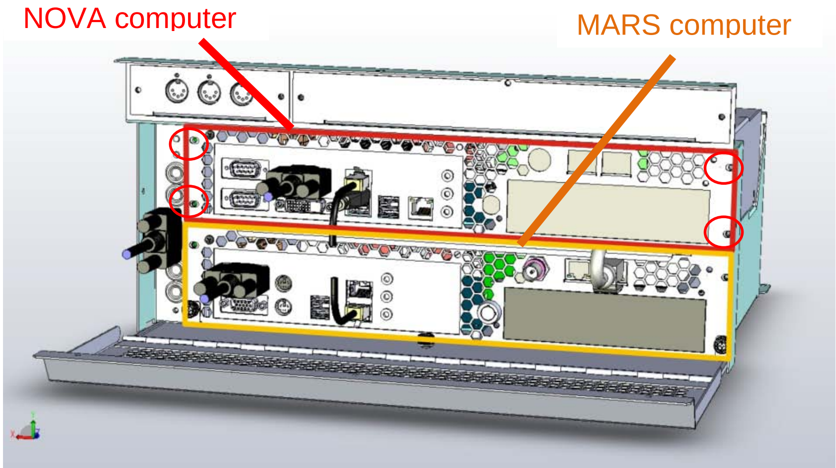
Using M.A.R.S as a Backup for Nova

In the unlikely event that the Nova computer fails, it is possible to use the M.A.R.S computer as a replacement. This will allow the show to go on! In this case, M.A.R.S. cannot be used.

How to Proceed

Both computers are mounted like drawers in the desk making it easy and fast to remove them.

1. Disconnect the cables (VGA, USB and Net Link).
2. Remove the 4 screws which hold each “drawer” in place.
3. And pull out the drawers:



4. Insert the M.A.R.S. computer into the Nova (top) drawer.
5. Reconnect the VGA and USB cables and restart the console.

*During the restart, a message invites you to press [**F4**] to force the computer to start as Nova instead of M.A.R.S.*

6. When the message appears, press [**F4**].

The replacement computer restarts with Nova.

Warning

Warning

DO NOT install the failed computer, or any other computer device, in the M.A.R.S. drawer

Please contact Innovason service for information on a permanent repair.

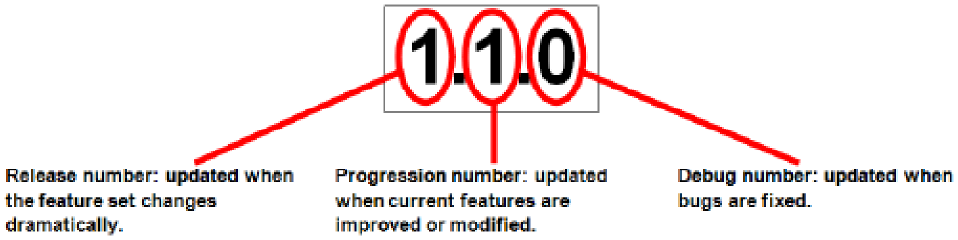
Installing a New Release of Nova Software

Innovason products undergo constant development, and the company usually provides 1-2 new software releases per year.

To download the latest release, please visit our website at: http://www.innovason.com

Release Description

Each release is named as follows: NOVA 1.1.0:


1.1.0
Release number: updated when the feature set changes dramatically.
Progression number: updated when current features are improved or modified.
Debug number: updated when bugs are fixed.

Installing the Software

⏩ Preparation:

1. Download the software from our website onto your computer.

The downloaded file is a zipped folder which contains 3 files:

- **Update.bat** – is a release updater.
- **Nova.zip** - contains the Nova software.

Note

Note that you can also use this file to install Nova onto your computer. Just decompress the files into a folder, and then launch the **nova.exe** programme from the Nova folder.

- **Installation.txt** – describes the installation procedure.

2. Create a folder on a USB key (the folder name must not contain any spaces or special characters).
3. And copy all 3 files into the folder.

Warning

Warning

You must copy all 3 files without changing the file names.

⏩ At the console:

1. Power on the console.

*During the restart, a message invites you to press [**F4**] to update Nova.*

2. When the message appears, press [**F4**].

This opens the Nova Install/Update file browser window.

3. Plug your USB key into the USB port at the front of the console.
4. Using the file browser, locate the folder on the USB key which contains the files you copied earlier.
5. Double-click on the **update** file.

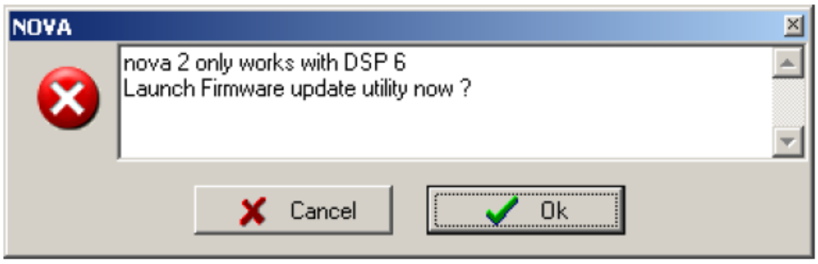
The system runs the update.

6. When prompted, press any key to continue.

The console now restarts with the new Nova software.

⏩ Running the Board Loader

If this is the first time you have upgraded from Release Version 1 to Version 2, then you will also need to update the DSP firmware. An error pop-up appears after the restart explaining the incompatibility and requesting that you do this:

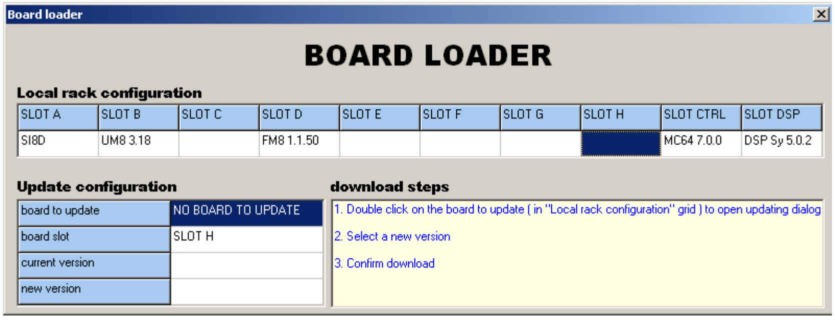


nova 2 only works with DSP 6
Launch Firmware update utility now ?

1. Select **OK** and then follow the on-screen messages:

- Select **Continue**.
- Save your file if you wish to.
- And select **Continue** once more.

The system now opens the Board Loader:



Local rack configuration

SLOT A	SLOT B	SLOT C	SLOT D	SLOT E	SLOT F	SLOT G	SLOT H	SLOT CTRL	SLOT DSP
SI8D	UM8 3.18		FM8 1.1.50					MC64 7.0.0	DSP Sy 5.0.2

Update configuration

board to update	NO BOARD TO UPDATE
board slot	SLOT H
current version	
new version	

download steps

1. Double click on the board to update (in "Local rack configuration" grid) to open updating dialog
2. Select a new version
3. Confirm download

The top of the display shows the cards fitted to the slots at the rear of the console, and their release versions.

2. Double-click on the name of the DSP card – e.g. **DSP Sy 5.0.2**.

This opens a file explorer window.

3. Select the new DSP firmware and Confirm.

*The DSP is downloaded to the card. This may take some time! When the download is complete, the message **Successful** appears.*

4. Select **OK** and then quit the Board Loader programme.

The system restarts, now with the correct DSP firmware. No errors should appear after the restart.

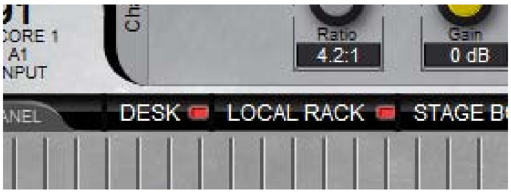
Resolving Communication Issues

After installing a new release of Nova software, or when you use M.A.R.S as a backup for the Nova computer, you may lose communication between the console and its local audio rack (DSP), etc.

The Symptoms

The following symptoms show that there is a problem:

- Local Rack and/or Desk status LEDs on the Main Mix display are red:



- The “ECLIPSE V5.0” message appears across the front panel VU meters.
- Touching a console fader, switch or encoder has no affect on the software or audio.
- The message “Instantiation KO” appears during startup. This indicates that at least, one I/O module has the wrong firmware, and an update is necessary.

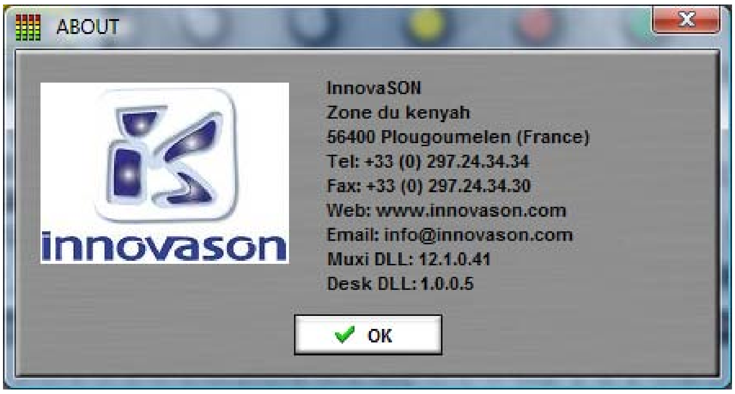
The problem can be resolved from the **System Setup** window, see next page.

The System Setup Window

To access this window:

1. Select “**Util -> About**” from the main menus.

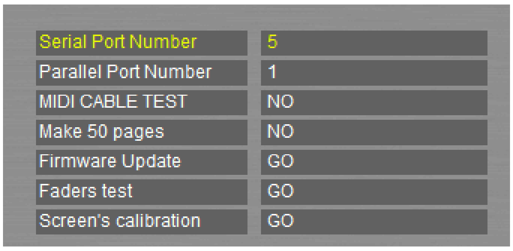
A pop-up window appears with information about the system:



InnovaSON
Zone du kenyah
56400 Plougoumelen (France)
Tel: +33 (0) 297.24.34.34
Fax: +33 (0) 297.24.34.30
Web: www.innovason.com
Email: info@innovason.com
Muxi DLL: 12.1.0.41
Desk DLL: 1.0.0.5

2. Using the console keyboard, type the password “**innova**”:

This opens the ***System Setup*** *window:*



Serial Port Number	5
Parallel Port Number	1
MIDI CABLE TEST	NO
Make 50 pages	NO
Firmware Update	GO
Faders test	GO
Screen's calibration	GO

3. Use the Up/Down arrows on the keyboard to select the parameter you wish to adjust.
4. Adjust the value using the Left/Right arrows.

The parameters values for Eclipse are:

- **Serial Port Number 5**: this is the address of the port used for control surface communication.
- **Parallel Port Number 1**: this is the address of the port used for local audio rack communication.
- **MIDI CABLE TEST**: this indicates the status of a MIDI cable connected from the MIDI in to MIIDI out of Nova.
- **Make 50 pages**: this entry is for software developers only and not for the user.
- **Firmware Update**: this launches software to update the FM-8VB, UM-8PO and DSP firmware.
- **Fader test**: this entry is for software developers only and not for the user.
- **Screen Calibration**: this launches the touch-screen calibration programme. Follow the instructions given.

Appendices

Appendix A: The Standard Template

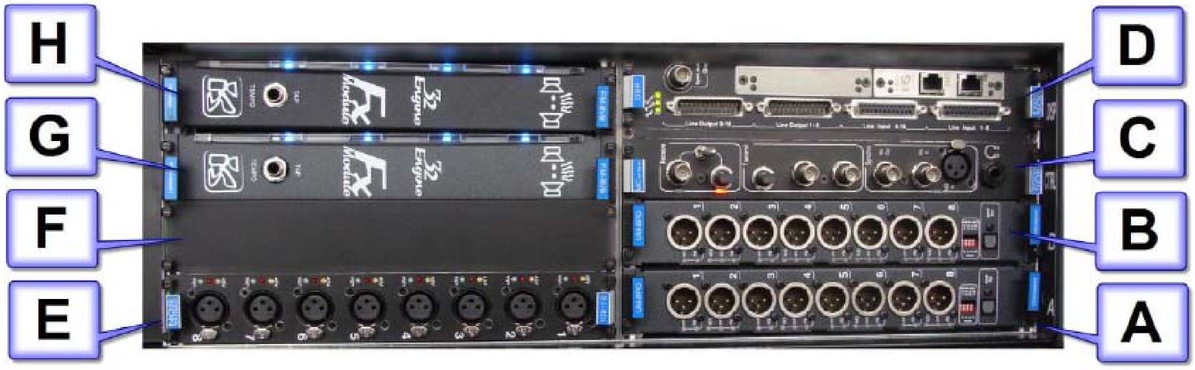
This appendix covers input, output and control surface assignments made by the **Templ1** standard template.

I/O Connections:

The **Templ1** File loads default input and output patching to the **PATCH IN**, **PATCH OUT** and **PATCH DIRECT** grids.

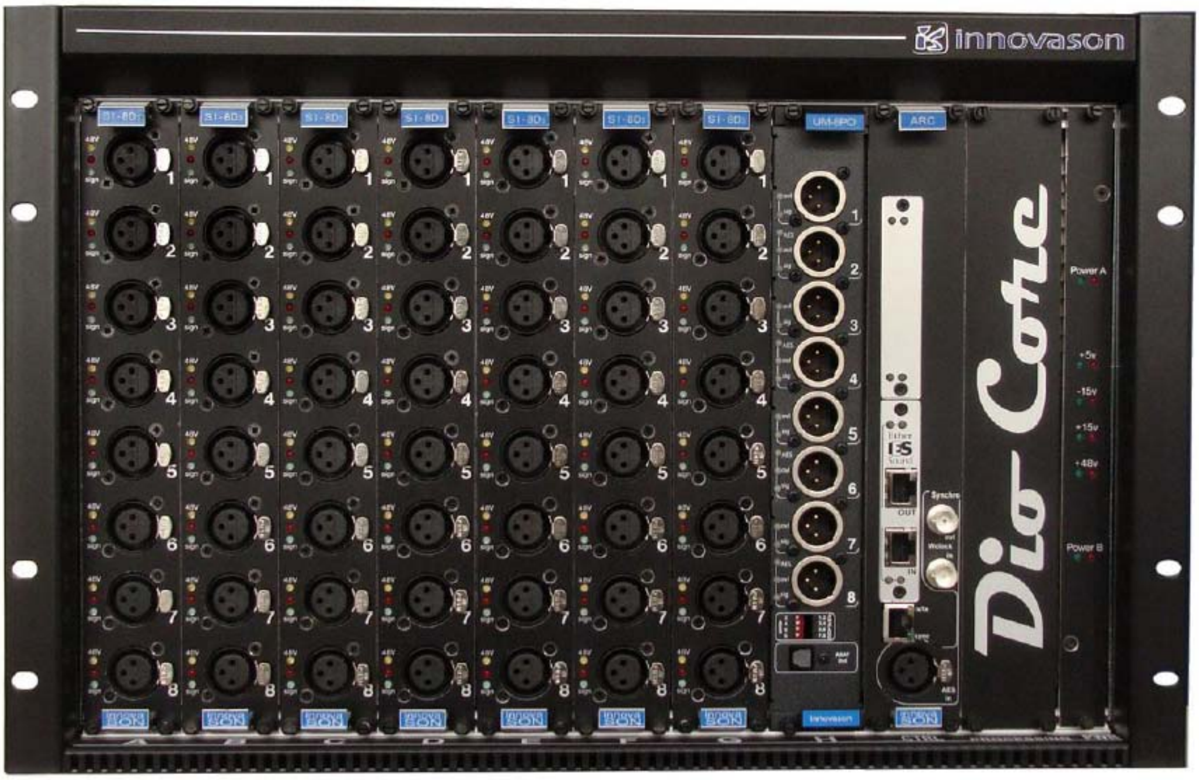
Use the tables to connect your audio devices as follows.

Console (Rear Panel) Audio Connections:



Slot	I/O Card	Physical Connection		PATCH Grid Assignments	Control Surface Assignments
A	UM-8PO	Outputs 1-2 Outputs 3-8	XLR or TOSLink	Master Left/Right Matrix 1-6	Faders 47/48 Smart Panel Bank D
B	UM-8PO	Outputs 1-6 Outputs 7-8	XLR or TOSLink	Matrix 7-12 Monitor Left/Right	Smart Panel Bank D TB/Mon Panel 01
D	DSP	Line Outputs 1-8	DSub25	Ext insert sends 1-8	Assigned as inserts
D	DSP	Line Inputs 1-8	DSub25	Ext insert returns 1-8	Assigned as inserts
D	DSP	Line Inputs 9-16	DSub25	Spare	n/a
D	DSP	Line Outputs 9-16	DSub25	Spare	n/a
E	SI-8D3	Mic/Line Inputs 1-8	XLR	Local Inputs 1-8	Smart Panel Bank B
G	FM-8VB	Internal Effects 1-8	n/a	Stereo FX 1-4 Sends Stereo FX 1-4 Returns	Smart Panel Bank A
H	FM-8VB	Internal Effects 9-16	n/a	Mono FX 1-8 (Inserts)	Assigned as inserts

DioCore Audio Connections:



Slot	I/O Card	Physical Connection		PATCH Grid Assignments	Control Surface Assignments
A	SI-8D3	Mic/Line Inputs 1-8	XLR	Ethersound Inputs 1-8	Faders 1-8
B	SI-8D3	Mic/Line Inputs 1-8	XLR	Ethersound Inputs 9-12	Faders 9-12
C	SI-8D3	Mic/Line Inputs 1-8	XLR	Ethersound Inputs 13-24	Faders 13-24
D	SI-8D3	Mic/Line Inputs 1-8	XLR	Ethersound Inputs 25-32	Faders 25-32
E	SI-8D3	Mic/Line Inputs 1-8	XLR	Spare	n/a
F	SI-8D3	Mic/Line Inputs 1-8	XLR	Spare	n/a
G	SI-8D3	Mic/Line Inputs 1-8	XLR	Spare	n/a
H	UM-8PO	Line/AES/ADAT Outputs 1-2 Outputs 3-8	XLR or TOSLink	Stereo Aux 1-4	Faders 41-44 (Aux L/R deployed to Faders 45&46)

Control Surface Layout

The **Templ1** File loads the following Personal Console Builder assignments to the Fader Strips and Smart Panel Controllers:

Fader Strips 1-48:

Fader Strip	Channel Type	Label	Mono/Stereo	DSP
1-32	Input Channels (DioCore Mic/Line inputs 1-32)	Di01 Di02..	Mono	Input Channel Processing
33	Spare			
34-39	VCA masters (VCA 1 to 6)	VCA1..	n/a	n/a
40	Spare			
41-44	Aux 1-4 (DioCore UM-8PO 1-8)	AUX1... Au L/R	Stereo	Output Processing (UM8)
47	Master Left & Right (Console UM-8PO card 1&2)	MasL/R	Stereo	Output Processing (UM8)

Smart Panel Controllers 1-48:

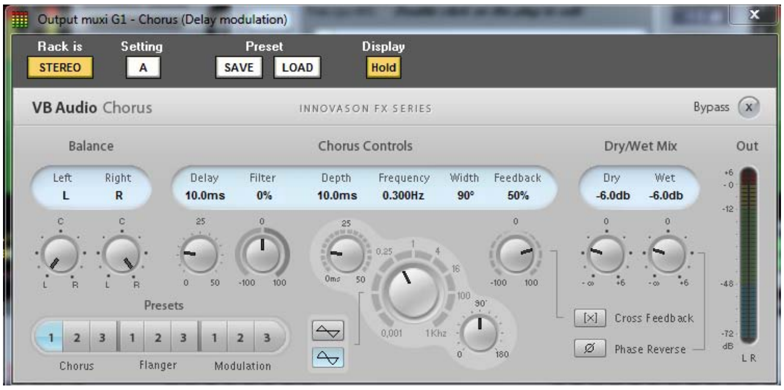
Smart Panel	Channel Type	Label	Mono/Stereo	DSP
A (FX) Upper	Input Channels (FX Returns 1-4)	FX1L/R..	Linked Mono	Input Channel Processing
A (FX) Lower	Auxes (FX Sends 1-4)	FX1..	Mono	Internal Effects
B (IN) Lower	Input Channels (Console Mic/Line inputs 1-8)	Li01..	Mono	Input Channel Processing
C (VCA)	VCA masters (VCAs 1-12)	VCA1..	n/a	n/a
D (Mtx)	Matrix masters (Console UM-8PO Out 3-14)	Mtx1..	Mono	Output Processing (UM8)

Appendix B: Plug-in Effects

The following are the Effects Editor windows for each FM8-VB card plug-in:

The Chorus

This plug-in provides different variations of **Chorus**, **Flanger** and **Modulation**:



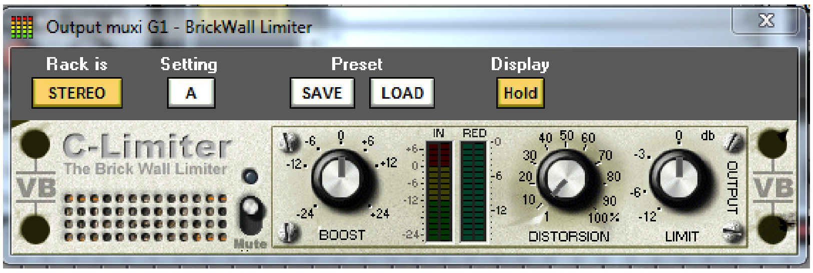
Output muxi G1 - Chorus (Delay modulation)

Rack is: STEREO
Setting: A
Display: Hold

Left: L
Right: R
Delay: 10.0ms
Filter: 0%
Depth: 10.0ms
Frequency: 0.300Hz
Width: 90°
Feedback: 50%
Dry: -6.0db
Wet: -6.0db

The C-Limiter

A brick wall limiter, generating pleasant distortion for high level signals:

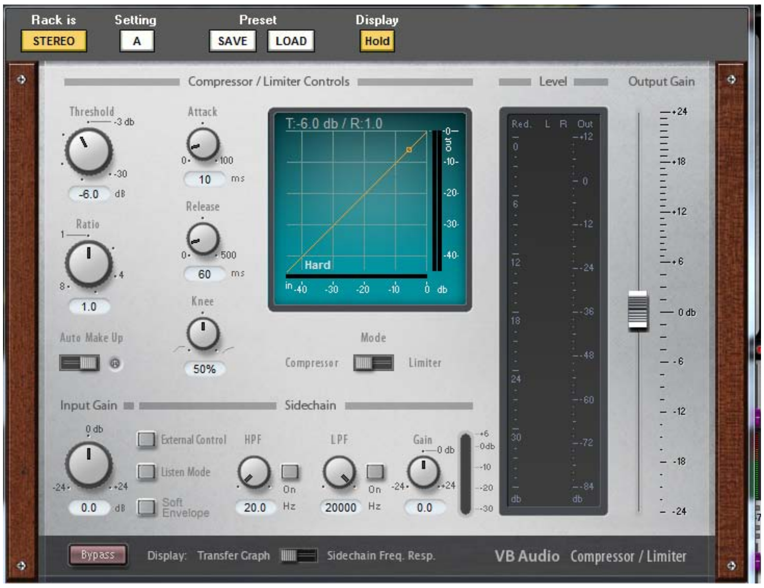


Output muxi G1 - BrickWall Limiter

Rack is: STEREO
Setting: A
Display: Hold

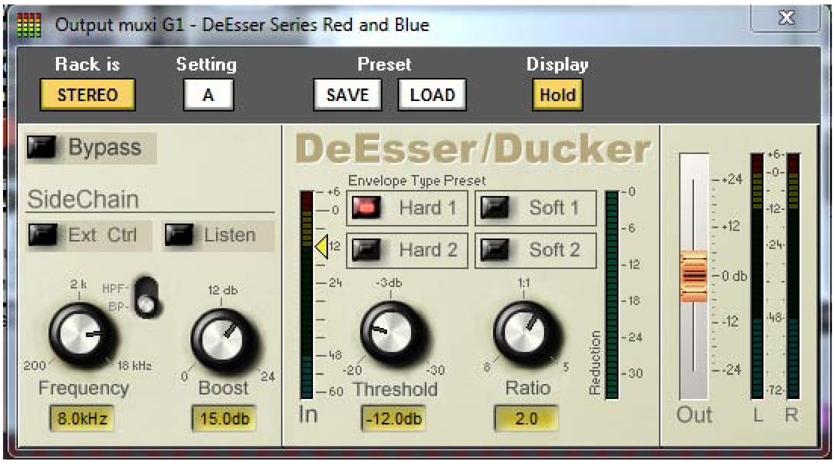
The Compressor

A very efficient compressor with Hard or Soft behaviour:



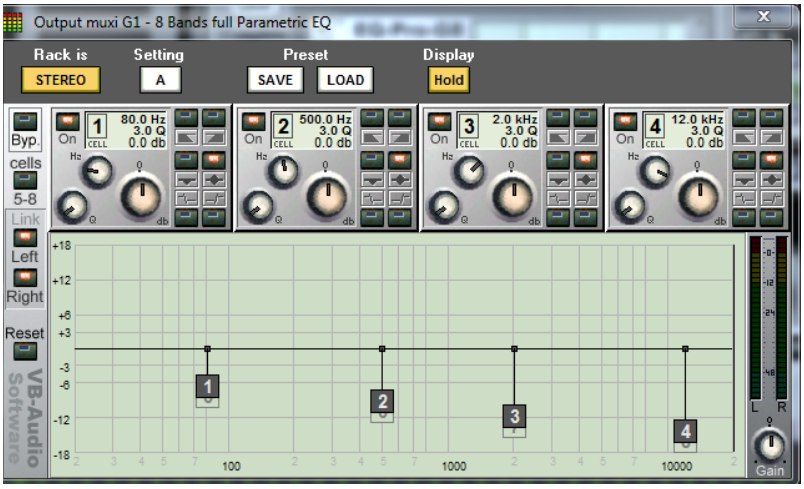
The De-Esser / Ducker

A De-esser with a band pass and high pass filter. This plug-in will be switchable to a Ducker in the next release:



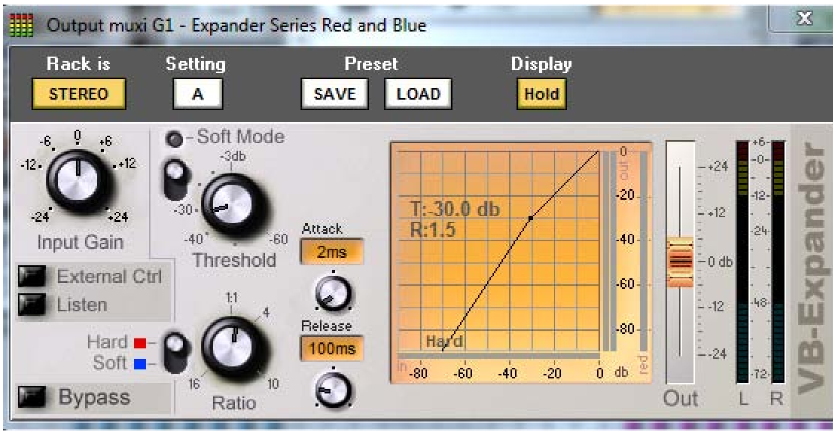
The EQ Pro G8

An 8-band EQ where each band can be parametric, shelving, a Notch, a high pass filter or low pass filter:



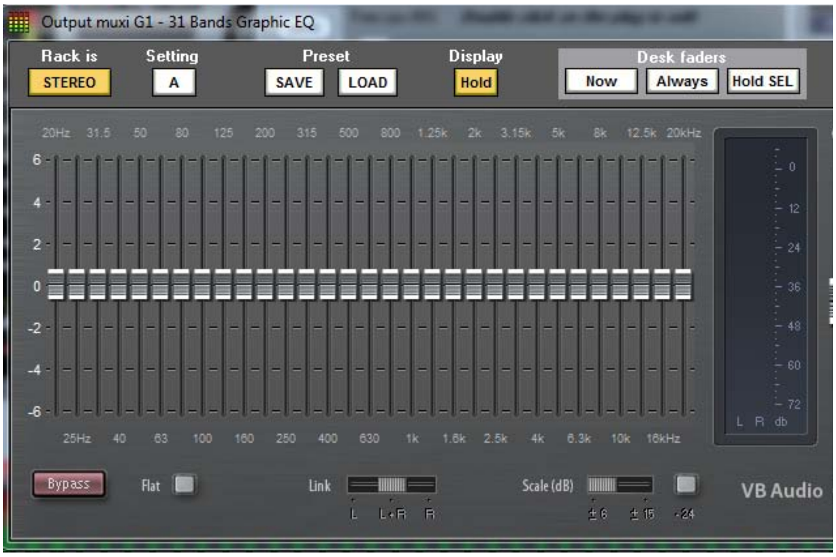
The Expander

An Expander with Hard or Soft behaviour:



The GEQ-31

A complete Graphic EQ offering a choice of dB scales:

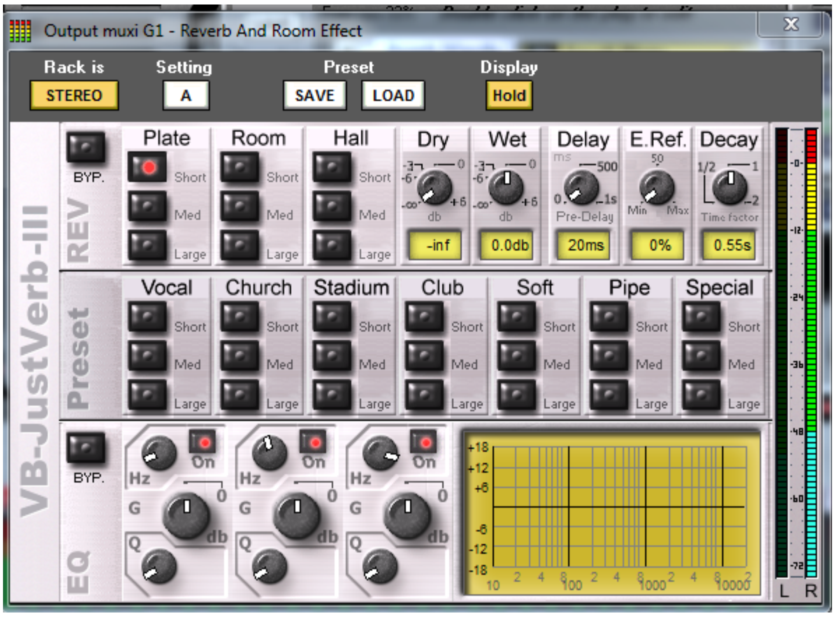


Output muxi G1 - 31 Bands Graphic EQ

Rack is: STEREO
Setting: A
Display: Hold

The Just-Verb^2

This reverb uses the famous algorithms of the VB-Audio Aphro reverb:



Output muxi G1 - Reverb And Room Effect

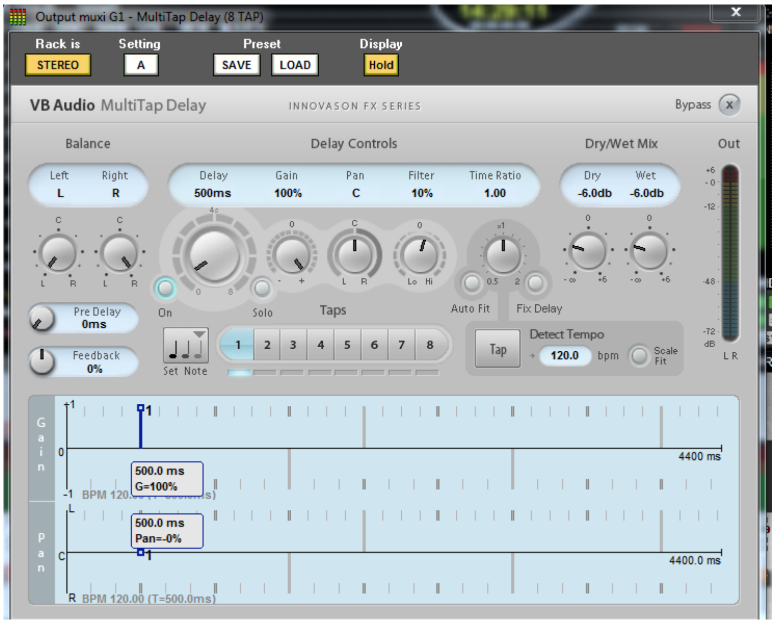
Rack is: STEREO
Setting: A
Display: Hold
Dry: -inf
Wet: 0.0db
Delay: 20ms
E.Ref.: 0%
Decay: 0.55s

The MultiTap Delay

This MultiTap delay can provide all variations of Echoes, Ping-Pong, etc. Use the **Tap** button to tap in the tempo. Each Tap has adjustable level and pan.

Tip

The tempo can also be adjusted from a rotary control or Tap Tempo button on the User Defined panel, see Page 322.



Output muxi G1 - MultiTap Delay (8 TAP)

Rack is: STEREO
Setting: A
Display: Hold

Left: L
Right: R
Delay: 500ms
Gain: 100%
Pan: C
Filter: 10%
Time Ratio: 1.00
Dry: -6.0db
Wet: -6.0db
Pre Delay: 0ms
Feedback: 0%
Detect Tempo: 120.0 bpm

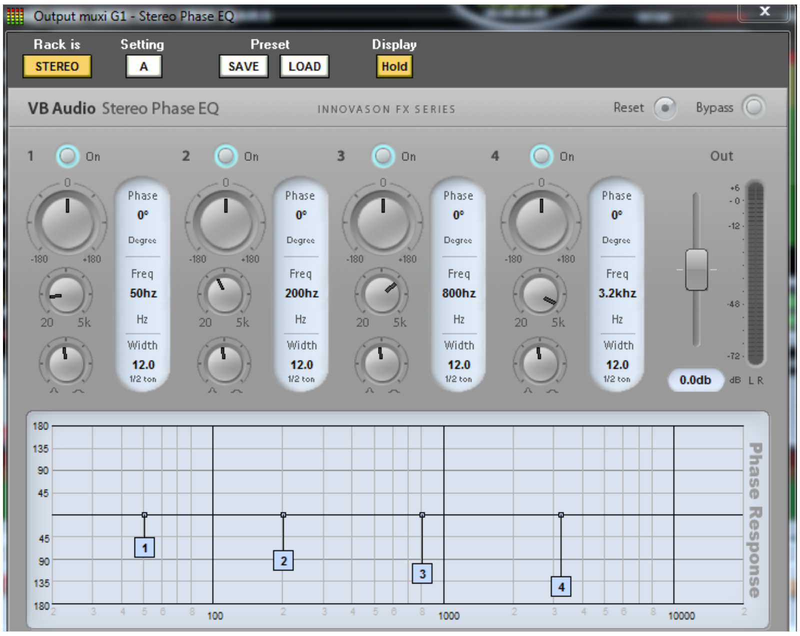
500.0 ms
G=100%

500.0 ms
Pan=-0%

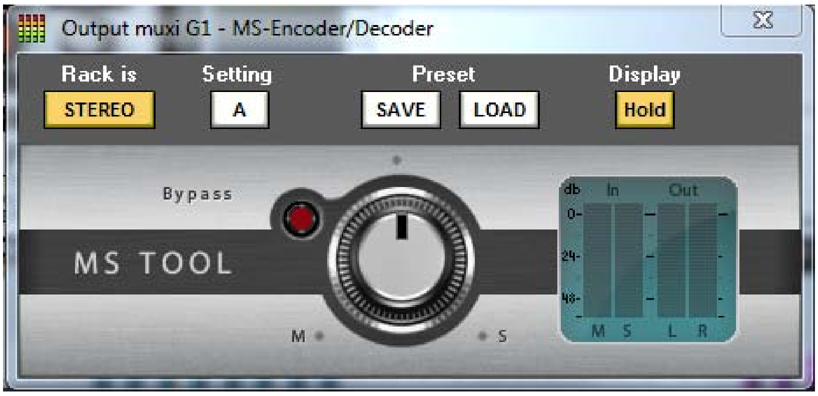
BPM 120.00 (T=500.0ms)

The Stereo Phase EQ

This unique plug-in allows adjustment of phase (+/- 180°) at four different frequencies:



The MS Tool



Glossary

DI-8S **DI-8Src**	Each of these modules provides 8 mono/4 stereo AES inputs (on 4 XLR connectors). They can be installed in any distant Stagebox, DioCore or local audio rack (Mix-Box). The **DI-8S** uses digital audio clock from the audio rack, so the incoming AES signals must be synchronous with console Word Clock. The **DI-8Src** includes an SRC (sample rate converter) and therefore can receive incoming AES signals which are not synchronous with console Word Clock.
Dio8Out	This 1u rack provides 8 remote output channels via CAT5 cable. The unit can daisy-chained as part of an **Ethersound** network or be used as the main outputs of the console and can also be used in conjunction with a **DioCore**.
Dio Av	This is a daughter card which can be installed into one of two locations on the DSP card. It allows the use of two A-Net™ networks (16 channels each) to connect to AVIOM™ personal mixers. AVIOM™ personal mixers are designed with LabX Technologies (LLCTM).
DioCore	A **DioCore** is a remote stage rack with 8 audio card slots that can hold 8- channel input or output cards for up to 64 I/Os. DioCore is controlled by an ARC card. Transmission is via Cat5v cable on the open 64x64 Ethersound protocol.
Dio Es	This is a daughter card which can be installed into one of two locations on the DSP card. It allows the use of a 64 bi-directional I/O Ethersound interface.
Dio MadiES	This option connects to the DIO interface of the console via a simple CAT5 network cable, to provide 56 (MADI1) or 64 (MADI2) MADI inputs/outputs. Connection may be via a coaxial or fibre optic cable (using ST connectors).
Ethersound	An open transmission protocol (64x64) invented by Digigram (See www.ethersound.com / www.digigram.com.)
FM-8VB	The **FM-8VB** card provides internal effects processing within the console. Each card has 8 internal inputs and output, with 4 effects engine processing module per I/O. It can be installed in any distant Stagebox, DioCore or local audio rack (Mix-Box). Plug-ins for the effects engines are developed by VB-Audio™, famous for its algorithms created for Pyramix™. (See www.vb-audio.com.)

M.A.R.S.	**M**ultitrack **A**udio **R**ecording **S**ystem – this is a 64-channel multitrack hard disk recorder integrated within the Eclipse console.
Mix-Box	The **Mix-Box** (or local audio rack) is the heart the console. It contains the DSP engine and MCoptical module that manages all of the console's I/O modules, the Muxipaire interface and communication with the console's internal PC. On Eclipse, the Mix-Box is integrated into the back of the console and provides 8 slots in total: 6 slots for I/O modules, one slot for DSP and one for the MCoptical card.
Muxipaire	This is the proprietary INNOVASON transmission protocol used with Stage-Box.
Nova	**Nova** is the Eclipse operating software which runs on the console's on-board computer or can be run offline on an external PC for training, presetting your show, etc.
PCB	**P**ersonal **C**onsole **B**uilder – this display within the Nova Software is used to configure the console's faders, Smart Panel controllers and mix busses. It can be used online from the console, or offline to create a configuration on an external PC.
SI-8D3	The **SI-8D3** is the famous 8-channel microphone preamp module which gave INNOVASON its reputation for high audio quality. It can be installed in any distant Stagebox, DioCore or local audio rack (Mix-Box).
SmartFAD	This is the name given to the concept of controlling several inputs from one physical fader. The user can configure a SVCA (SmartFader Master) to control a number of input slaves (SFADs). The user can also configure where those slaves appear when the **SEL** button is pressed on the master creating a Smart Fader zone (SZONE). By configuring multiple SVCAs, SFADs and SZONEs the layout of the desk can be customised to handle complex show configurations.
Stage-Box	A **Stage-Box** is a remote stage rack with 8 audio card slots that can hold 8-channel input or output cards for up to 64 I/Os. Stage-Box is controlled by a SCoptical card fitted within the unit. Transmission is via dual coax or optical lines utilizing the proprietary INNOVASON transmission protocol called Muxipaire.
UM-8PO	The **UM-8PO** is a "universal" signal processing audio output module providing 8 analog and/or digital AES outputs plus optical format via an ADAT Tos-link connector. It can be installed in any distant Stagebox, DioCore or local audio rack (Mix-Box). The card includes signal processing for each output including a 31-band Graphic EQ, 8-band Parametric EQ, frequency specific Dynamics and Delay.

Technical Data

Control Surface

- Dimensions (H x W x D): 45,74 x 30,4 x 9,33”
- Weight: 99lb
- Dual redundant power supply
- Power requirements: 90-253 VAC, 46- 63 Hz
- Operating temperature: 50 to 95° F
- Two Littlelite connectors
- Onboard computer running management software
- Drawer to house recording PC and hard disk
- 12” swivelling touchscreen (may be folded down for storage/travel)
- Forty-eight 100mm motorised “touch-sensitive” faders
- 98 rotary knobs with push-switch
- Local audio rack on rear of console with six slots for I/O modules
- Four SubD25 connectors providing 16 line inputs and 16 flat outputs
- DSP engine enabling mixing of up to 104 inputs into 48 mix busses simultaneously
- Muxipaire interface enables connection of a 64 I/O Stage Box via coax or fibre optic cable up to 500m
- Ethersound interface provides connectivity of up to four DioCore audio racks and all Ethersound peripherals to a bi-directional 64-channel Ethersound network via a CAT5 cable of up to 100m
- Coaxial I/Os for synchronisation of Word Clock (44-49KHz)
- Delivered with flight case and protective cover:
    - Dimensions: 49,6 x 48 x 15,15
    - Weight: 132 lb

Audio Rack

- Dimensions (H x W x D): 12.2 x 12.3 x 19”
- Weight: 44lb
- Dual redundant power supply
- Power requirements: 300W max
- Operating temperature: 50-90°F
- Eight I/O card slots
- Muxipaire Stage Box if rack equipped with SCoptical card
- DioCore (Ethersound interface) if equipped with ARC card (up to 4 DioCores may be used simultaneously)
- Supplied with flight case:
  - Dimensions (H x W x D): 29 x 20.6 x 24.6”
  - Weight: 59.5lb

I/O and FX cards

- All cards operate at a 24-bit resolution and a frequency of 48 KHz (43-49KHz if platform is synchronised to an external signal)
- **SI-8D3**: eight mic/line inputs on eight balanced XLRs. Gain is adjustable from -27 to +63dB.
- **DI-8S**: four inputs on four balanced XLRs provide eight AES input channels
- **DI-8Src**: four inputs on four balanced XLRs provide eight AES input channels, each of which has its own SRC (sample rate converter). Accepts AES signal with a frequency from 32-56KHz.
- **UM-8PO**: eight analogue outputs on eight balanced XLRs. Each pair of outputs is switchable to AES. The eight audio channels are also available as ADAT via a TOSlink connector. Each output is fully processed including 8-band parametric EQ, 31-band graphic EQ, Gate, Compressor, Delay. Output level from 10.5-22dBu
- **FM-8VB**: Eight-channel I/O module with, between each I/O, four effects engines, each of which can receive a VB Audio plug-in. Reverb, Echo, Chorus, Flanger, De-esser, Compressor, Gate, Multiband compressor, etc.

Options

- **Dio AV**: AVIOM A-Net Interface
- **Dio Madi Es**: Ethersound / Madi and Madi / Ethersound converter 64 channels
- **Dio 8 Out** : 1U Ethersound module, 8 analog balanced outputs

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